THE CHEMIST AND DRUGGIST

Vol. III.] NOVEMBER 15th, 1862. [No. 39.

OUR FOURTH VOLUME—SUGGESTED ALTERATIONS.

As we are now making our arrangements for next year, we call upon our friends to communicate to us without delay any ideas for improving or strengthening the Journal which may have occurred to them. Without the valuable advice which we have from time to time received from individual members of the trade, we could not have made our Journal what all must now admit it to be, namely, the organ of the general body of Chemists and Druggists. If the Journal loses its representative character it will not be our fault, for we shall always endeavour to carry out suggestions made by our correspondents, when, by so doing, we may advance the interests of the trade. Two letters suggesting important alterations in our forthcoming numbers have already reached us, and as we cannot well make the proposed alterations without consulting our subscribers, we print them in our correspondence columns.

The writer "J. V. S.," a wholesale Druggist, has before addressed us on the same subject, and as his objections to a certain feature of our Journal may be sound, we have taken the liberty of publishing his letter—though, like the former one, it was evidently intended for our private perusal—in order that it may elicit the opinions of our subscribers. It will be seen from this letter that the wholesale houses dislike our Journal because of the Price Current published in its pages. We believe that our correspondent's statements are perfectly correct, and must admit that his personal objections are quite natural; but we have yet to learn whether our readers will sanction the suppression of the Price Current. Though we should, of course, like to gain the good-will of the wholesale houses, we cannot adopt "J. V. S.'s" suggestions unless his views are endorsed by our subscribers.

The proposal for increasing the size, and consequently the price of our Journal, made by our clever correspondent, "Hibernicus," is one that we received with intense satisfaction, as we have long been sighing for more space to deal with the interesting subjects brought constantly before us. All regular readers of the Journal will know that we have often been compelled to defer the publication of promised articles for want of space; but we alone know what a mass of useful and readable matter has to be shelved every month. For an increased subscription we could promise the Chemists and Druggists of the United Kingdom a monthly journal quite equal to the *American Journal of Pharmacy*, and possessing many striking features which that excellent publication does not possess. For the past three years we have regularly received all the best chemical, pharmaceutical, and commercial periodicals published at home and abroad; but in consequence of the narrow limits of our Journal, we have not been able to make much use of the interesting and valuable information afforded by them.

We long for more space to discuss the numerous important trade questions which have lately arisen, and to repel the accusations that are continually brought against the Chemists and Druggists by their enemies. At the present time the doctors, through their principal organ, the *Lancet*, are doing all they can to injure our honourable trade, and to undermine the confidence of the public, which the members of this trade deservedly enjoy. In the pages of our Journal the falsehoods and misstatements of the doctors' unprincipled scribes must be exposed. The *Pharmaceutical Journal* has become a sort of jackal to the medical lion, and merely reproduces in a feeble way the *Lancet's* abuse of non-pharmaceutical Chemists. If our subscribers will sanction an increase in size and price, we shall be able to fight the doctors with articles as strong as those now levelled against us by their weekly journal. As a specimen of one of these articles, we reprint the following from the *Lancet*, of the 25th ult.:—

CHEMISTS AND PHARMACEUTISTS.

The recent parliamentary recognition of the Chemists who belong to the organization of the Pharmaceutical Society, by granting to them immunity from serving on juries, promises to answer in some measure the useful end which we foresaw, and which the members of the medical profession must, in the public interest, especially desire to bring about. Besides the Pharmaceutical Chemists who are attested to possess the ordinary scientific qualifications necessary for the task of preparing and dispensing drugs, there is a motley host of traders outside this organization, who exercise the calling of Chemists and Druggists. Undoubtedly a considerable number of these are persons of respectability, of sufficient attainments and proper qualifications for their occupation. Some few whom jealousy, inertia, or peculiar circumstances have kept out of the pale of the Society are of considerable standing. But in the ragged army are included numbers of chandler-shopkeepers and the smallest dealers in sundries—men who, as the Mayor, Mr. Goadsby, told his fellows in the drug trade at a meeting last week of the United Society of Chemists and Druggists at Manchester, are "no more fit for their duties than they are to be cardinals of the Holy See." No parliamentary exemption could be given to such a body, for the simple reason that they could not define themselves. Free trade in poisons is in England carried to such an extent, that if it were once understood that a mere vendor of drugs should be exempt from serving on juries, every shopkeeper in the kingdom would add a few potent poisons to his articles of sale. The Legislature have properly demanded that those who call themselves Chemists shall give some guarantee of their fitness to exercise their calling, or at least that the privilege of the order shall only be granted to those who have satisfied a test. It was stated at the meeting that of 40,000 Chemists and Druggists in England, only 2,000 were members of the Pharmaceutical Society. It may be enough to show the necessity for generalizing a test of some sufficient kind, that it was recommended at the meeting, as a sort of ideal, that in setting to work to define themselves, the Chemists and Druggists should first of all stipulate for five years' apprenticeship; next, they should be able to read a prescription, with a general idea of the intent of the prescriber; and lastly, they should be able to prove themselves conversant with doses. This done, they could with some reason invite Parliament to recommend the Home Office to send examiners through the country with a view to ascertain who were competent and who were not. With well educated and conscientious dispensing Chemists, and counter-practice—that bane of the poor—discontinued, we should have a foreshadowing of an honest and practical system of medical care for the population, of which as yet but dim outlines are visible.

PROPOSED LEGAL DEFENCE ASSOCIATION.

ACTING upon the suggestion made in the correspondence columns of our October number, several gentlemen connected with the trade are now endeavouring to form an Association for Mutual Legal Defence, in cases of real or alleged accidental poisoning, and also in cases of a less serious character. They propose to provide for the payment of the damages which may be found against the defending Chemist by means of a call upon each of the members, after the manner now adopted by death clubs.

The probable expense to each member is estimated at from 5*s*. to 10*s*. per year, in addition to the 5*s*. membership fee of the United Society.

Those gentlemen who wish to assist in carrying out this project are invited to send in their names as early as convenient to the Secretary of the United Society, or to Mr. Barnaby, Chemist, Rochester, who will give further information.

We cannot offer any opinion upon this proposed association, until we know something more of its regulations. The movement has, however, originated with gentlemen in whose judgment we have the greatest confidence. Its success must of course depend upon the number of its early adherents, and if Chemists and Druggists are slow to respond to the appeal of its promoters, it will not be continued.

Mr. Barnaby sends us a copy of a letter referring to this proposed association, which he has received from the Secretary of the United Society. This we print below:—

United Society of Chemists and Druggists,
Temporary Office, 2, Bell Yard,
Doctors' Commons, E.C., London.
18th October, 1862.

My dear Sir,—I am in receipt of yours of yesterday's date, wherein you inquire "whether this society would sanction any arrangement for securing the trade the best legal advice and defence free of cost in actions at law, provided a sufficient number of persons gave in their adhesion, and the expense was found to be within a moderate increase to the present membership fee of the society?"

In reply, I am sufficiently authorized by the committee (knowing their anxious desire to render the society as practically useful as possible) to state that they would be most happy to assist in this project, and would consider it as the best furtherance of their 2nd and 5th objects (see prospectus).

The committee have already been enabled to be of service to many members, by merely giving answers free of cost to questions relating to the legal rights of the trade: and therefore would wish to give every encouragement to a matter of this sort, consistent with the responsibility of managing small funds in the accomplishment of the objects of the society with efficiency.

I shall have pleasure in laying your letter before the committee in their meeting in November next, meanwhile you are at liberty to use this letter as you think proper.

I am, dear Sir,
Yours truly,
C. J. Buott, Secretary.

Mr. H. Barnaby, Rochester.

THE NATURAL ORDERS OF PLANTS.

IRIDACEÆ.—THE IRIS, OR CORN FLAG ORDER.

The plants of this family are to be met with in various parts of the world, but are chiefly inhabitants of temperate and warm regions, and occur most abundantly at the Cape of Good Hope. Lindley states* that they "are principally natives either of the Cape of Good Hope or of the middle parts of North America and Europe. A few only are found within the tropics, and the order is generally far from abundant in South America, if compared with the number that exist at the Cape. The genera Marica and Moræa appear to occupy the same station in hot climates that Iris, a closely related genus, does in cooler latitudes. Crocus, among the most conspicuous of the order, occurs only in Europe and Asia. None of the Cape or New Holland forms appear in America." The order consists of herbaceous plants, rarely of under-shrubs, which are usually smooth; but, if present, the hairs are simple. It belongs to the class Endogens, sub-class, Petaloideæ, and contains fifty-seven genera, and five hundred and fifty-seven species. Many of them, as the Crocus, Gladiolus, Cris, &c., contribute greatly to the adornment of our gardens by their beautiful flowers.

Botany.—The leaves are equitant (the two sides of the leaf are brought together, and adhere, except at the base, where they enclose the opposite leaf, whose sides are in the same state; they appear as if they rode upon each other), or distichous (arranged upon opposite sides of the stem or axis, and in two rows). The inflorescence (the manner in which the flower-buds are arranged upon the axis) is terminal, in spikes, corymbs, or

---

* Veg. King., p. 160.

panicles, or crowded, sometimes radical. The flowers are regular (the parts being of equal size, or united in equal degrees) or irregular (being unequal in size, or united in unequal degrees), with spathaceous bracts (the leaf from which the flower proceeds, intermediate between the leaves of the stem and the calyx). The perianth (the calyx and corolla combined; the petals and sepals so closely resembling each other as not to be readily distinguished) is superior, petaloid, six parted, and arranged in two whorls. The stamens (male organs) are three in number, and situated on the outer segments of the perianth. The anthers (the little cellular cases on the apex of the stamen, bearing the pollen) are two-celled, and extrorse (the part where the pollen is discharged turned outwards from the pistil or female organ). The ovary (that part of the female order which contains the ovules or rudimentary seeds) is inferior and three-celled. The style (that part which connects the stigma and the ovary), one; the stigma (that part of the female organ which receives the pollen), three, often petaloid, as in the Cris. The fruit is capsular, three-celled, and three-valved, with a loculicidal dehiscence. The seeds are numerous, having a horny or hard albumen.

Distinction from other Orders.—It is distinguished from *Amaryllidaceæ*—the Amaryllis order—by its three stamens with extrorse anthers. From *Orchidaceæ*—the Orchis order—by its not being gynandrous (having stamens, style, and ovary all blended together into one common body), and by the nature of its seeds and placentæ. From *Zingiberaceæ*—the Ginger order, and *Marantaceæ*—the Maranta, or Arrow-root order—by its three perfect stamens, and the structure of the leaves. From *Hæmodoraceæ*—the Blood-root order—by its extrorse anthers and the insertion of the stamens on the outer whorls of the perianth.

General Properties.—The rhizomes of many contain acrid properties, which render them purgative and emetic; others possess fragrant and slightly stimulating qualities. Some few furnish colouring agents. In many, starch is very abundant; but, being contaminated with an acrid principle, they are rarely employed as articles of food. It is stated, however, that the Hottentots eat the tubers and corms of various species whose starch renders them nutritious. Some are considered antispasmodic and carminative.

PRINCIPAL PLANTS AND USES.

Crocus.—The dried stigmas of the species *Aureus*, *Luteus*, *Odorus*, *Vernus*, &c., are employed in some parts of the Continent for the preparation of saffron. The species *Sativus* is the source of officinal saffron, on which an article will be found in our Botanical Calendar for October.*

Ferraria.—The species *Purgans* and *Cathartica*, as their specific names indicate, are purgative.

Gladiolus.—The roots of the species *Communis*, a native of the South of Europe, have similar properties to those of the Iris Pseud-acorus. The species *Segetum* has been reputed aphrodisiac.

Iris.—The juice of the root of the species *Fœtidissima*, the Roast Beef plant, a native of the South of England, is said to be sternutatory, and useful in dropsy and scrofula. An article on the species *Florentina* will be found in our Botanical Calendar for September.† The fresh root of the species *Germanica* is hydragogue and errhine, and is said to externally repel eruptions. It contributes in furnishing the orris-root of the shops. Endlicher states that the flowers of this, and those of the species *Sibirica*, when treated with lime, furnish a green colour, Liliengrün, much used by artists. The rhizomes of the species *Pallida* constitute part of the orris-root of the shops. The rhizome of the species *Pseud-acorus*, or Water Flag, an indigenous perennial, is acrid, and possesses purgative and emetic qualities. Its seeds, when roasted, have been recommended as a substitute for coffee, but they possess none of the important properties of that valuable article. The species *Sibirica* is regarded as anti-syphilitic. The rhizome of the species *Tuberosa* is incisive and purgative, and considered by some as *hermodactyles*. An article on the species *Versicolor* will be found in our third volume (p. 125).

---

* Vol. i. p. 338.

† Vol. i. p. 305.

Sisyrinchium.—The species *Galaxioides*, a Brazilian plant, is stated to possess purgative properties.

Trichonema.—The roots of the species *Edule* are stated by Welstead to be eaten by the natives of Socotra.

Witsenia.—The stem of the species *Maura* is said to abound in rich saccharine juice.

CHEMISTRY AND PHARMACY AT THE INTERNATIONAL EXHIBITION.

By C. W. Quin, F.C.S.,

SUPERINTENDENT OF CLASS II. (CHEMICAL AND PHARMACEUTICAL PRODUCTS).

The Great Exhibition of 1862, the greatest this world has ever seen, closes this day, and the long-eared army of carping critics who brayed at the lion while alive, may now solace themselves by kicking at his dead body. Little harm will they do, however, with their cynicism and snarling, for those whose knowledge of truth is greatest, the flower of the philosophers, poets, painters, and handicraftsmen of our time, have pronounced the display to have been the grandest ever brought together by the hand of man. To say more would be to apologize for the spots on the sun; we shall therefore take our last look at the British Chemical Department, concluding in our next number with a brief examination in spirit of the productions of our foreign friends. The eastern annex is already shorn of much of its beauty. The famous rosaniline crowns which excited the admiration of all classes, from Faraday down to the smallest of the braying fraternity mentioned above, have been removed, and most other objects of wonder and interest have followed, but luckily the cases which we have not yet examined are still in their places.

Immediately opposite the case of Wilkinson and Heywood is that of May and Baker, who exhibit fine specimens of calomel and corrosive sublimate, besides a long list of artificial fruit essences, imitated with extraordinary accuracy. At the corner, Hanbury and Sons show a fine series of pharmaceutical preparations and drugs, many of which are unique of their sort. Immediately adjoining is the display of Messrs. Morson and Sons, consisting chiefly of the finer chemical preparations used in pharmacy, with which their name has long been connected. To particularize, we may mention some fine specimens of codeine, chlorate of soda, which is fast replacing the less soluble salt of potash, sulphate and bisulphate of nickel, iodide of cadmium, atropine, several opium and cinchona salts, and a few scale preparations.

Next to this is a remarkably fine crystal of bichromate of potash, sent by White's, of Glasgow, the row being ended with the collection of Bullock and Reynolds. The display of bile products, some of which seem destined to occupy an important position in the pharmacy of the future, is most interesting and instructive. Mr. Bullock exhibits them as the results of many months of labour over the unsavoury interiors of we are afraid to say how many, bullocks and pigs. A splendid specimen of taurine is also shown, besides a number of ferruginous scale preparations, with which Mr. Bullock's name is inseparably connected. Opposite is the unequalled show of cinchona products by Messrs. Howard and Sons, of Stratford. They are so numerous that it would be impossible to enumerate them all; suffice it to say that there is hardly a single salt or alkaloid procurable from any species of bark that has not its well-prepared representative. They also contribute what was at first the most magnificent crystallization of iodide of cadmium in the building, but which has long been spoiled by the heat and light of the summer. A noteworthy specimen of neutral iodide of potassium is most interesting from crystallizing in prisms with pyramidal ends. Rochelle salt and borax of great purity and whiteness complete the display. Next to them is the case of Messrs. Johnson and Sons, containing many objects of great interest to the pharmacist, more especially specimens of flexible lunar caustic, a valuable preparation, which we have already mentioned in commendatory terms in this journal. Above their case is a row of show crystals, for shop ornamentation. These we particularly recommend to our readers' notice as more beautiful and philosophical than the many silly objects used by chemists and druggists for the decorations of their windows and counters. On the other side we find a capital series of products sent by Cox and Gould, illustrating the manufacture of acetic acid and the acetates from the unburnt wood to the crystallized salts. They also show some fine specimens of the iodides used in medicine and photography. Opposite we have the gigantic crystal of alum contributed by Mr. P. Spence, of Manchester, the crystals in the interior of which, weighing over a hundredweight, have been devoured by alum-loving millions, who persisted in parching their tongues with the astringent salt, in spite of the admonitions of X 142, specially placed in charge of the monster. Adjoining is the case of Messrs. Bouck and Co., containing grand crystals of sulphate of copper, manufactured by the new process, in which the ore is used instead of the metal.

At the corner we have some excellent specimens of acetate of soda from Messrs. Richardson, and round the corner is a collection of starches by Messrs. Reckett, of Hull. Passing onwards we come to the display of borax by Wood, one of the largest borax makers in the world, who absorbs nearly the whole of the boracic acid made by the heirs of Count Lardarel, in Tuscany. Near to this is an extensive series of fine chemicals, by Messrs. Bolton, of Holborn, who have been long known for the care they bestow in obtaining perfectly pure products. Messrs. Versmann and Co.'s case of tungsten colours completes the display on the floor of the class. We conclude by giving a passing glance at several matters on the walls of the building.

A collection of indigenous medicinal plants from Ceylon, by Mr. Keating, excited great interest amongst the visitors, but owing to the native names only being known, it will be impossible to investigate their properties without knowing something of their botanical position. On the north wall Messrs. Howard exhibited a magnificent series of barks, of nearly every known description, accompanied by exquisitely beautiful coloured plates of the plant in the living condition. They also contributed a Ward's case, containing some living bark trees, which excited great interest. A collection of valuable preparations by Messrs. Wright and Francis on the east wall, and a series of extracts, beautifully prepared by Mr. Hooper, of Pall Mall, must bring our examination to a close.

In the Foreign Department we must use the past tense, as the whole of it is cleared away. France merits our first notice from the extent and excellence of the specimens contributed. To both the scientific chemist and the practical pharmacist, the case of Menier contained objects of the greatest possible interest. In a dark corner of the case, in what we should consider a very unworthy position, M. Berthelot exhibited a collection of organic bodies formed by synthesis, including alcohol, thiosinnamine, stearine, propylic alcohol and several others. Below, M. Menier displayed a number of pharmaceutical products of great excellence. We noted especially some fine crystals of morphia and permanganate of potash, igasurine, and a host of others, which will require our utmost strength to equal, and which it would be impossible to beat. The iodides contributed by Cournerie, and several others, were numerous and good. Renard and Co. were the principal contributors of aniline dyes, and in large chemicals we would especially mention Messrs. Kuhlman, the Bouxviller Co., J. Sauce, Le Camus, Coignet, and several more. On the whole, the display of French chemicals was a very fine one indeed, and fully bore out the warnings contained in the earlier articles on the Chemistry and Pharmacy of the International Exhibition.

In our last month's report we stated that Messrs. Hutchinson and Earle avail themselves of Longman's patent process for converting salt into sulphate of soda by the use of iron pyrites instead of sulphuric acid. This statement, we are informed, is erroneous. Messrs. Hutchinson and Earle do not use Longman's process, which is only adopted at one establishment, at St. Helen's. They adopt the usual method, which is to manufacture sulphuric acid by burning the pyrites, and then to use the acid so obtained for the decomposition of the salt.

ASCLEPIAS INCARNATA.

Synonyms.—White Indian Hemp, Flesh-coloured Asclepias, Swamp Milkweed, or Silkweed, &c.

This is another member of the family *Asclepiadaceæ*, the Asclepias or Milkweed order, and a native of the States of North America, where it flourishes in damp and wet soils.

Botany.—The root, which is the officinal part, varies in thickness from one to six lines, and is of a light yellowish or brownish colour. The stem is two or three feet high, erect, downy, and branching above. The leaves are lanceolate, nearly sessile, somewhat downy, and opposite, from four to seven inches long, and from half an inch to one inch and a half wide. The flowers are arranged in somewhat panicled umbels, seated upon peduncles about half the length of the leaves, many-flowered, and generally in opposite pairs. The blossoms appear from June to August, and the flowers are sweet-scented, and of a red or reddish purple colour, or white. A milky juice is emitted from the plant when wounded.

Chemistry.—The active properties, which reside in the cortex of the root, are eliminated by the agency of water.

Medicinal Properties.—In its properties it much resembles the Asclepias Tuberosa described in our last number, but is more actively emetic and cathartic. It is diuretic, and is employed in North America as a popular and efficacious anthelmintic, for which purpose the powder is used in doses of from ten to twenty grains three times a day; or it is administered in the form of decoction. The tincture of the root is stated to have been employed very successfully in the treatment of gonorrhœa and syphilis.

Dr. Hauser used it with the happiest effects in many forms of fever, but chiefly as an adjuvant to other medicines. He also employed a tincture of the root in gonorrhœa and syphilis for many years, and says, "I have generally prescribed it in a table-spoonful dose three times a day; *i.e.*, before breakfast, dinner, and supper. And this I have done with very little regard to the stage of the disease, both in gonorrhœa and syphilis."

Dr. Griffith states that it has been employed by several physicians, who speak of it as a useful emetic and cathartic. It has been found not only alterative, diaphoretic, and diuretic, but one of the finest aperients in the Materia Medica.

Professor Tully recommends it in catarrh, asthma, syphilis, rheumatism, and worms.

Preparations and Doses.—Messrs. Tilden and Co. give the following in their Book of Formulæ.—Fluid extract, dose gtts. xx. to gtts. xl. Solid extract, from grs. iij. to grs. v. They likewise give formulæ for a tincture and syrup.

ASCLEPIAS SYRIACA.

Synonyms.—Common Silkweed or Milkweed, &c.

This is also a native of North America, where it is very common, growing in sandy fields, on the road sides, and on the banks of streams from New England to Virginia. When wounded, like the preceding species, it emits a milky juice.

Botany.—The stems are simple, from three to five feet high. The leaves lanceolate, oblong, petiolate, opposite, and downy on their under surface. The flowers are large, of a pale purple colour, sweet-scented, and arranged in nodding umbels, which are two or three in number. The fruit consists of a pod or follicle, which is covered with sharp prickles, and contains a large quantity of silky seed down, which has been sometimes used as a substitute for fur in the manufacture of hats, and for feathers in beds and pillows.*

Chemistry.—The juice has a faint smell, a sub-acrid taste, and an acid reaction. Dr. C. List discovered in it a peculiar crystalline substance of a resinous character, to which he gave the name of *Asclepione*. It is described as white, crystalline, tasteless, inodorous, and fusible. It is insoluble in water and alcohol, but soluble in ether, oil of turpentine, and concentrated acetic acid. A strong solution of potassa does not affect it. Its formula is $C_{40}\ H_{34}\ O_6$.†

---

* "United States Dispensatory," p. 125.

† List. Liebig's Annalen, Jan., 1849.

Medicinal Properties.—This species closely resembles the A. Incarnata in its properties, but is, in addition, endowed with narcotic and anodyne qualities, bearing in this respect an analogy to Cimicifuga Racemosa, or Black Cobosh. It is stated* to have proved particularly serviceable in rheumatic affections, inasmuch as, while it exerts an eliminant action, it tends to relieve pain and induce sleep. It has been used with advantage as a diuretic in dropsy, and has also proved useful in asthma and catarrh. It decidedly promotes expectoration and alleviates the cough and dyspnœa. It has likewise been reported to have been successfully employed in gleet, gonorrhœa, scrofula, &c.

Preparation and Doses.—Similar to those of A. Tuberosa and Incarnata.

MAIZE PRODUCTS.

Duryea's Maizena.—Having given in a recent number a descriptive account of the history, progress, and extent of culture of *maize*, or Indian corn, we now proceed to treat of some of the many valuable products which skill, science, and enterprise have obtained from it, and brought into use here and elsewhere; and we commence with those of the Glen Cove Company, of New York, because Duryea's *maizena* has been rewarded with a prize medal by the Jurors of Class 3, Section A, and the *maizena* puddings of the refreshment department of the International Exhibition have obtained an enviable popularity, which bids fair to be extended far and wide. A few prefatory words on the origin, locality, and extent of the company's manufactures cannot fail to be interesting.

The Glen Cove Company dates its origin from 1855, but its buildings and machinery were not completed, or in full operation, till 1857. The beautiful village of Glen Cove, Long Island, is well-known as a popular place of summer resort, and noted for its romantic and diversified scenery. The company possesses there seventy-five acres of land, which is most beautifully laid out, a portion of it being devoted to the residences of the workmen employed in the factory, and those of the principal managers.

The site upon which the buildings are located covers an area of several acres, fronting on a fine piece of water. The main building is six stories in height, with connecting wings, all of which are constructed in the most substantial manner, and fire-proof, and built with an express reference to the purposes for which they are used in its various forms. They have also spacious store-houses for their grain; also buildings for making their cases, and storing and perfecting the vast amount of material required in the various phases of their extensive business; in fact, the property of the Glen Cove Company constitutes quite a town by itself. They are now in their fullest operation, manufacturing from fifteen to twenty tons per day, which is finding a market in every part of the globe. The fact that the *maizena* (of which the Glen Cove Company are the original and only manufacturers) is made from the perfectly-matured maize of the Central and Southern States, gives the buyers, of tropical climates, a guarantee that its qualities will remain unimpaired for years, opening in as perfect condition as when sent from the factory—a very important fact, and readily appreciated. By a process peculiar to the Glen Cove Company, the starch is extracted, leaving the albumen and gluten, the *very life* of the grain, in the *maizena*. The perfection of the raw material makes all steaming, bleaching, &c., entirely unnecessary. Whether regarded as nourishment for the child, or as food for the man, as a medicinal agent for the sick or debilitated, or a refined and delicious luxury for the table, the *maizena* is probably the perfection of American foods sent to this country, and, when once known, will, from its really wonderful qualities and its great economy, become a treasure that no family will be without. *Maizena* was reported by the jury as an "exceedingly excellent food." The wholesale agents for Great Britain and Ireland are Messrs. Tomlin, Rendell, and Co., 33, Eastcheap, without whose name and address none is genuine.

---

* Tilden's Journ. Mat. Med. vol. iii. p. 312.

The following recipes will doubtless be found useful to many of our readers :—

Maizena Cake.—½ lb. of maizena, 2 cups of sugar, ½ cup of butter, 3 eggs, ½ tea-spoonful of cream of tartar, and ¼ tea-spoonful of soda, dissolved in ⅓ of a tea-cup of milk. Mix thoroughly, place in patty pans, and bake immediately in a quick oven from 10 to 15 minutes. The cake improves by age, if kept in a dry place.

Maizena Pudding.—Garnish the inside of a mould with any fruit preserved in sugar. Take 1 pint of milk, add to it 2 ounces of sugar, put it on the fire until it boils. In the meantime, take three table-spoonsful of the maizena flour, mix it with a little cold milk to the consistency of cream, then add to it, well beaten, 2 or 3 yolks of eggs, stir, and pour the mixture at once into the boiling milk, which you gently stir for a minute or two whilst boiling. Take it off the fire, and add vanilla, or any other flavour to your taste. Then fill the mould ; let it get perfectly cold before you turn it out on the dish. The addition of apricot, pine-apple, or any other fresh made *purée* of fruit, to pour round this delicious pudding, will vary and improve its *gusto.* Plain maizena pudding, without fruit, merely flavoured with a little orange or lemon zest, can be served also with or without cream, whisked with pounded sugar, and poured over the pudding.

Dissolve two small dessert-spoonsful of the maizena in a little cold milk, add it to a pint of milk (if thin, or skim), or if rich, to a quart, and boil it a few minutes. It will produce an excellent substitute for cream. So prepared, it greatly improves coffee, chocolate, tea, &c. For children or invalids increase the quantity of maizena, adding milk, or even water, as fancied ; use it as a beverage alone, or with tea, chocolate, coffee, mutton broth, or beef-tea, giving also some of the sponge cake, made according to the foregoing receipt. This, as a preservative or restorative, will be found a useful, economical, and valuable addition.—*Grocer.*

SCIENTIFIC INTELLIGENCE.

Proposed Alteration of the Grain in the British Pharmacopœia.—Our scientific contemporary, the *Chemical News*, thus notices the decisions of the General Medical Council respecting the weights to be used in the new Pharmacopœia :—"The General Medical Council have succumbed to common sense, and resolved not to interfere with the grain weight. They have determined, however, to retain the avoirdupois pound, as proposed, against which no objection can be made, and also the avoirdupois ounce, but discontinued the use of the drachm and scruple in the Pharmacopœia. As the values of these latter weights are not affected, they will, of course, be used in prescribing, as heretofore, but now as merely denominational weights. This is, perhaps, the most sensible resolution the Council could come to ; and with this arrangement no practical difficulties need occur. We could hope that nothing now will impede the speedy publication of the Pharmacopœia ; but we do not learn that the question of copyright has yet been settled, nor that the power to make the use of the Pharmacopœia compulsory has been obtained. In the meantime, we do learn that some of the new formulæ introduced are being prescribed, and that certain physicians are sending their patients to one or two establishments, as the sole possessors of these valuable recipes. Such conduct requires no comment ; and, perhaps, it would not be beneath the dignity of the General Medical Council to notice the scandal."

On Secret Poisoning.—A paper having this terrible title was read by Professor Harley, at the Meeting of the British Association, held last month at Cambridge. Prof. Harley stated that although he had no wish to engender groundless suspicions, or excite unnecessary alarms, yet he was sorry to say he could not but repeat the statement he made last year in a paper on slow poisoning, read before the Royal Medico-Chirurgical Society of London—namely, that he believed the cases of secret poisoning that are discovered form but a small per-centage of those that actually occur. Nay, more, he even went a step further, and declared that he not only believed that we magnified the difficulty of perpetrating the crime, but that we were also inclined to exaggerate the facility of its detection. No doubt, modern discoveries in physiology and chemistry had enabled us not only to distinguish between the effects of poison and natural disease during life, but likewise to detect and extract the poison from the tissues after death. But modern discoveries had also made known to us many poisons with which we were hitherto unacquainted. It was in toxicology as in naval warfare, no sooner was a projectile discovered that is considered irresistible, than our engineers set about discovering armour-plates more invulnerable than their predecessors. So, no sooner does the criminal find a new poison that he can use with impunity, than the experts set about discovering a means for its detection. Dr. Harley remarked that the great desire of the poisoner was to get hold of a poison the effect of which would so closely resemble that of natural disease as to be mistaken for it. Fortunately, however, this was attended with extreme difficulty, as the effects of poison were generally sudden in their onset and rapid in their termination; for the poisoner seldom had time or opportunity of administering the poisonous agent in so small a quantity and for such a length of time as is requisite to produce an artificial state of disease, which may be mistaken, at least by the accomplished physician, for real disease. It had been asserted that in all cases of poisoning where death occurred, the poison ought to be found in the tissues after death. Prof. Harley, however, pointed out that this was not strictly true; for even in the case of arsenic, which was supposed to be the most persistent of all poisons, if the patient only lived long enough the mineral might be entirely eliminated by the excretions before death, and afterwards not a trace remain to be detected in the body. Such occurred in Alexander's case, when, although it was known that arsenic was the poison which caused death, none was found in the body. Alexander, however, did not die till the sixteenth day. For this and other reasons the author then said, "That as the not finding poison in the system after death is no absolute proof that the patient did not die from its effects, the symptoms observed during life, in conjunction with the morbid appearances observed after death, even when no poison is discovered by chemical analysis, ought to be sufficient to convict the poisoner; and even the symptoms alone, if there be good circumstantial evidence, especially if combined with proof of a motive, ought to convict, just as was done at Palmer's trial." The Professor concluded by saying that in all cases of suspected murder, great care should be taken to avoid telling the persons around the patient of the suspicion. The patient himself should be the first confidant; for if there was no motive for suicide, he was the most likely to be aware of a motive in the persons surrounding him. The next confidant should be the doctor, who, by obtaining some of the secretions and having them carefully analysed by a competent person, would soon be enabled to decide if it was a case of secret murder, and perhaps also even to detect the criminal.

On the Motion of Camphor towards the Light.—Mr. C. Tomlinson read a most interesting paper before the Physical Section of the British Association. He said all books on chemistry claim for camphor a tendency to make a deposit towards the light. This idea originated in the remarks made by Chaptal, a celebrated French chemist. The subsequent experiments of Dr. Draper confirmed this view, and assigned the same property to various other bodies, as water, alcohol, &c. The conclusion arrived at by Dr. Draper, after a long series of experiments, was that light and electricity were the main agents in producing these phenomena. The speaker, however, after repeating Dr. Draper's experiments, and making many others, was led to doubt the agency of either light or electricity in the matter. Having instituted a new course of experiments, he concluded that all the phenomena in question were the result of heat alone. To separate the action of light from heat, he used opaque vessels, and obtained a faint deposit; and on using a bottle covered with a substance which transmitted heat, but excluded light, he obtained a dense deposit. Artificial heat produced the same effect; the density of the deposits not depending upon the amount of light given out by the heated substance, but upon the capability of the vessel to absorb the heat. Camphor, he stated, was a substance giving forth vapour, and the deposits made by it are analogous to those of hoar frost. He here illustrated his theory by several interesting diagrams and experiments. A vessel containing camphor, when immersed in water, though exposed to the strong light of a July sun, gave no deposit; but when exposed to the same sun, with no water to obstruct the heat, a copious deposit was formed. If the vessel be exposed to light and protected from radiation, no deposit is formed. But wherever it radiates unequally, there is a cooling of the surface, and consequently a deposit. Barometers which have a wide tube, and are set in an open frame, give a mercurial deposit; but if the tube be narrow, and protected from radiation by a wooden frame, none whatever is produced. Melloni's observation, that a piece of fallen timber, lying on the ground covered with snow, keeps a space round it free from snow, is confirmity of the theory; for in the same way a camphor bottle which is protected from radiation, as, for instance, by a bar of wood crossing part of it when exposed in the window, fails to deposit anything upon the part so covered. Mr. Tomlinson had made numerous experiments, placing bottles containing camphor in every window of his house, until his residence was known as the "bottle house," and the conclusion at which he had arrived was, that the phenomena observed in camphor deposits was a pure effect of heat, independent of the agency of either light or electricity. The entire paper is printed in the November number of the *Philosophical Magazine.*

On Tobacco Smoking: its Effect upon the Pulsation.—This is the title of a paper read before the British Association by Dr. Smith. The author had ascertained that tobacco smoking causes a large increase in the rate of pulsation in some persons, while in others no increase occurs, and hence that there is a diversity in the mode of action of this substance as there is in the admitted good or evil effects upon the body. He pointed out that the only period in which the inquiry could be made is at about 10 p.m., when there had been no food taken after 6 o'clock, since at that period the rate of pulsation naturally falls, and an increase could be due to the tobacco only. He had experimented upon Mr. Dale and other medical men at Scarborough, and had found that the effect upon Mr. Dale was as follows:—During the first six minutes the effect was very small, only an increase of four beats per minute; but after that period there was a steady and rapid increase until the 21st minute, when the tobacco was consumed. The average increase from the 6th to the 13th minute was 19 pulsations, and thence to the end of the experiment was 31½ pulsations per minute; but the total increase in one minute was 37½ pulsations. Whether a further increase would have been attained, was not ascertained; but from the order of the increase it was probable that such would have occurred within narrow limits. It was found that after the smoking had ceased the rate of pulsation fell in a few minutes, but it yet remained 10 or 15 pulsations higher than was natural for two hours. There was less effect produced upon the pulse when the tobacco was smoked in a hookah. In this class of cases tobacco acts as a stimulant, and may supply to the literary man the state of system at night which would be induced by a moderate quantity of alcoholic stimulants; but when the body is of full habit, it must lead to disturbed sleep, and may lead to apoplexy.

JUROR'S REPORT ON MEDICAL AND PHARMACEUTICAL PRODUCTS.

THE following is Mr. Daniel Hanbury's report on Class II. Section B (Medical and Pharmaceutical Products and Processes) at the International Exhibition. It will necessarily be read with great interest by our readers:—

The Jury for Class II., to which was referred the examination of chemical and pharmaceutical processes and products, was divided into two sections—Section A, the attention of which was directed to the chemical substances used in manufactures, and the rarer chemical substances, prepared chiefly for the use of the scientific chemist; and Section B, which was required to examine the chemical substances used in medicine and pharmacy, as well as the unmanufactured drugs. These sections proceeded with their business for the most part separately—joint meetings, however, being held, as directed by the regulations of Her Majesty's Commissioners, for the purpose of submitting the awards of each section to the entire Jury. The sections being required to present separate reports upon the various objects submitted to their notice, and to offer such remarks as the examination of these objects had suggested, the secretaries were instructed to furnish such documents to Her Majesty's Commissioners. The following report is that drawn up by the secretary for Section B:—

Accepting as convenient the classification contained in the Jury Directory, we will proceed without further prelude to review the various products to which the attention of the section was directed.

1. PHARMACEUTICAL PRODUCTS FROM THE MINERAL KINGDOM.

a. Non-metallic Substances and their Compounds.

Under this head we have to mention Iodine, of which samples are shown by Messrs. John Ward and Co. of Glasgow, Messrs. Picard and Co. of Granville, Messrs. F. Tissier and Son of Le Conquet, near Brest, Messrs. Cournerie, Son and Co. of Cherbourg, and others. The last three manufacturers also contribute Bromine. Of iodine in a purified condition we find specimens remarkably well crystallized, exhibited by Messrs. Huskisson and Sons of London, and Messrs. E. Roques and Co. of Paris. By the former house are also shown iodide of sulphur and iodide of arsenic, the latter very interesting from the magnitude of the specimen and its singularly beautiful crystallization. Bromide of arsenic, as a transparent, brownish, crystalline substance, is also shown by Messrs. Huskisson.

Iodoform is exhibited in many collections, both British and foreign; but it has been so little employed in medicine, that we can hardly suppose it is intended to figure as a pharmaceutical preparation.

Chloroform.—The manufacture of this important drug has been greatly advanced during the last eleven years; and chloroform now is both purer and cheaper than it was in 1851. Much of that now sold in England is prepared from "Methylated Spirit," which, it may be well to explain, is alcohol of a specific gravity not lower than ·848 mixed with one-ninth of its volume of pyroxylic spirit or wood-naphtha. The alcohol, which by this admixture is rendered unfit for drinking, is exempted from duty, and can therefore be applied to many industrial purposes. It may be purchased at about 4*s*. per gallon, while the same spirit without naphtha cannot be had (owing to the heavy duty) for less than 20*s*. per gallon. Chloroform carefully prepared from mythylated spirit is so slightly contaminated with the odour of the naphtha, that for all practical purposes its purity is amply sufficient. In some samples, indeed, not even a trace of the naphtha can be detected.

Glacial phosphoric acid, the Jury have observed, is exhibited by Messrs. Morson and Son of London, Mr. Otto Hermann of Schönebeck, near Magdeburg, Dr. L. C. Marquart of Bonn, and M. G. Kühnemann of Kahla.

Carbolic acid, or hydrate of oxide of phenyle, is displayed by several French exhibitors, accompanied in one or two instances by laudatory handbills of the most extravagant character. There is also a specimen of the acid, consisting of a mass of colourless crystals, exhibited in the British department.

Dr. F. C. Calvert has lately pointed out that the medicinal properties observed in coal-tar by some French *savants*, appear to depend upon the presence of carbolic acid, and that this acid, which is now manufactured in a state of purity, certainly possesses remarkable antiseptic properties.

b. Alkalies, Earths, and their Compounds.

Potash, Soda, and Ammonia.—The salt of potash and soda used in medicine are exhibited in large quantity by England, France, and the German States. Many of them being used in the arts more than in medicine, and being accompanied by chemical products with which pharmacy has nothing to do, have been examined by the Jury, Section A. As, however, this report would be imperfect if it contained no mention of articles so important as bicarbonate of soda, borax, nitrate, bicarbonate, and sulphate of potash, and the like, it is desirable that we should briefly advert to a few of the principal collections in which they are found:—some of the collections including these products come strictly within the scope of the present report.

Among the last-named collections belong those of Messrs. Huskisson and Sons of London, and Messrs. Howards and Sons of Stratford. The former exhibit phosphate of soda, nitrate, bicarbonate, tartrate, and binoxalate of potash, and iodide and bromide of potassium—most of them show-specimens, and extremely fine. Messrs. Howards exhibit borax (of which they are manufacturers on a large scale), boracic acid, carbonate, bicarbonate, nitrate, chlorate, tartrate, and hydrate of potash; carbonate, bicarbonate, sulphate, and potassio-tartrate of soda, also iodide of potassium in two forms, and carbonate of ammonia.

This carbonate of ammonia deserves mention, not only on account of its purity, but also as being derived from an unusual source, namely, the double sulphate of ammonia and magnesia, which occurs in the boracic acid lagoons of Tuscany, and which crystallizes out during the purification of the acid in this country. This double sulphate yields ammoniacal preparations which are entirely devoid of the empyreumatic odour that frequently contaminates those manufactured from the sulphate of ammonia of gas-works —a contamination easily detected in liquor ammoniæ by the odour of naphthaline, which is perceptible in it after saturation with sulphuric acid.

Chlorate of potash is sent from the works of Messrs. Albright and Wilson, and from those of Messrs. Muspratt of Liverpool, that from the former being remarkably beautiful. Messrs. Morson and Son exhibit some well-crystallized chlorate of soda; a salt which has been introduced into medicine for the same purposes as those required from chlorate of potash, over which it has the advantage of being more soluble. Iodide of sodium, very well crystallized, appears from the laboratories of Messrs. Davy, Mackmurdo and Co. and of Messrs. Huskisson; iodide of ammonium, now sometimes prescribed by physicians, is also shown by Messrs. Huskisson. The form of hollow, truncated pyramids, which the crystals of this salt occasionally assume, and of which specimens are here shown, is worthy of notice.

Glauber's salt, bicarbonate of soda, and sal-ammoniac are shown by the Jarrow Chemical Company; iodide of potassium, chloride of potassium, and sulphate of soda by Messrs. J. Ward and Co. of Glasgow; bicarbonate of soda, also borax with the native borate of lime, from which it is prepared, by Messrs. Gaskell, Deacon and Co. of Warrington; Messrs. Chance Brothers of Birmingham exhibit carbonate of ammonia and sal-ammoniac. The saltpetre and nitrate of soda sent from the works of Messrs. Richardson Brothers of London are most beautiful as specimens of large and fine crystals.

In the Belgian Court, the Jury has observed the Glauber's salt, bicarbonate of soda, sulphate of iron, sulphate of magnesia, and sulphate of zinc, sent by Messrs. Cappellemans and Co. of Brussels, also a collection of similar character from M. Van der Elst, of the same city.

France contributes chlorate of potash from the St. Gobain works; from those of Messrs. Tissier and Son, chloride, iodide, and bromide of potassium, iodate of potash, besides iodine and bromine, as already noticed. This firm, which carries on a very extensive manufacture of products from kelp at Le Conquet, near Brest, produces annually iodine and iodide of potassium, each to the extent of from 8,000 to 10,000 lbs., bromine 1,500 to 1,800 lbs., and bromide of potassium 1,100 to 1,300 lbs.

M. Roseleur of Paris sends acetate of soda and phosphate of ammonia, besides other products still less pharmaceutical; M. Kestner of Thann, bicarbonate of soda and other chemical products; Messrs. E. Roques and Co., carbonate of ammonia and iodide of potassium; Messrs. Cournerie of Cherbourg, iodide of potassium in enormous crystals, bromide of potassium, and iodate and bromate of potash; Messrs. Lalouel de Sourdeval and Margueritte of Paris, various salts of ammonia.

The Jury have also examined with interest the products obtained from the mineral springs of Vichy, which are now the object of a considerable trade. There are two saline substances known as Sels de Vichy; the one, consisting chiefly of carbonate of soda, crystallizes out when the waters are evaporated to a sp. gr. of about 1·200; the other is produced by evaporating the water to such an extent that the residual saline mass sets upon cooling, and therefore contains nearly if not quite all the mineral constituents not susceptible of decomposition by the process. The first of these salts is used for making Vichy water extemporaneously, the second for baths. Of the extent to which they are capable of being produced, an idea may be formed when we know that from the spring called La Grande Grille, it is calculated that more than 1,000 lbs. of salt might be obtained daily, were all of its water submitted to evaporation.

Of mineral waters in general, it may here be stated that very numerous samples of both natural and artificial have been sent to the Exhibition, and that the Jury, having deliberately considered in what manner it should act with regard to them, arrived at the following decision:—

"That the exhibition of natural mineral waters does not call for the award of either Medal or Certificate of Honourable Mention."

"That artificial mineral waters, although, without doubt, prepared in numerous instances with skill and accuracy, do not from their nature offer characters which could enable the Jury to judge accurately of their merits, and that it would therefore be expedient to award premiums for their exhibition."

The Austrian Court contains an excellent series from Messrs. Wagenmann, Seybel, and Co. of Liesing, near Vienna, comprising acetate, borate, nitrate, and sulphate of soda, sal-ammoniac, phosphate, and sulphate of ammonia, sulphate of magnesia, &c. M.

Moll of Vienna contributes phosphate aad bicarbonate of soda, bicarbonate of potash, and iodide and bromide of potassium.

The Zollverein department affords several collections of the rougher chemical products, among which may be mentioned that of Mr. O. Hermann of Magdeburg, which includes Epsom salt, and acetate and carbonate of potash, the last stated to be of unusual purity; also that of Messrs. Voigt and Haveland of Breslau, in which we find nitre, Epsom salt, and borax. The beautiful collection of Messrs. Kunheim and Co. of Berlin, though affording but little that is pharmaceutical, contains the finest iron alum we have seen.

Lithia.—In the year 1843, Mr. Alexander Ure of London drew attention to an observation of Lipowitz, that a solution of carbonate of lithia exerts a remarkable solvent power upon uric acid, and suggested that advantage might be taken of this fact by injecting into the bladder such a solution, with a view of dissolving or disintegrating uric acid calculi. From the difficulty of obtaining lithia, or from some other cause, it does not appear that Mr. Ure's suggestion led to any practical result until the year 1857, when Dr. Garrod, Physician to University College Hospital and Professor of Materia Medica in University College, London, commenced the administration of lithia internally in cases of gouty diathesis and chronic gout. Dr. Garrod observed that the atomic weight of lithium being very low (7), its oxide possesses a far greater power of saturating acids than do those of potassium or sodium; and further, that carbonate of lithia will dissolve urate of soda from a piece of gouty cartilage much more efficiently than either bicarbonate of potash or of soda. He found that carbonate of lithia, given in doses of one to four grains dissolved in water, and repeated two or three times a day, produced no physiological symptom, but that it exerted a marked influence in cases where the patients were voiding uric gravel, causing the formation of these deposits to diminish, or even to cease. In many instances in which it was administered to gouty subjects, it had the effect of reducing the frequency of the attacks and of improving generally the condition of the patients. Dr. Garrod recommends that carbonate of lithia should be given in solution freely diluted, or still better, in the form of aërated water, with which, if desirable, bicarbonate of potash may be combined. Aërated lithia water may be conveniently prepared so as to contain five grains of the carbonate in the half-pint bottle.

Citrate of lithia, of which a beautiful specimen in large transparent crystals is exhibited by Messrs. Morson and Son, is a salt of easy solubility, and may be used as a substitute for the carbonate in cases where the direct alkaline or antacid properties of the latter are not required. A granular composition, called effervescing citrate of lithia, is exhibited by Messrs. Savory and Moore and by Messrs. Wright, Francis and Co.; that of the latter firm is stated to contain one grain of carbonate of lithia in each drachm, and to produce, when water is added, an agreeable saline draught.

The sources from which the lithia salts hitherto manufactured have been obtained are, we believe, the following:—

1. Triphyline, a mineral consisting of the phosphates of iron, manganese, and lithia, and found at Bodenmais, in Bavaria. This source of lithia is said to be now exhausted. 2. Lepidolite or lithia-mica, a mineral in which lithia is associated with silica, alumina, potash, &c. 3. The waters of Kreuznach, in Prussia, and of certain mineral springs in the Grand Duchy of Baden. Lithia also occurs in petalite and spodumene, in the former of which it was discovered by Arfvedson in the year 1817, but its extraction from these minerals is not easy, and they are accordingly not employed.

Magnesia.—Calcined magnesia, carbonate of magnesia, and Epsom salt are exhibited by numerous manufacturers, both British and foreign. The sources of Epsom salt, and the magnesian products derived from them, are, through increased chemical skill, very different from what they were formerly. At the works of Messrs. J. C. Gamble and Son, St. Helen's, Lancashire, Epsom salt is manufactured (as it was formerly in those of Messrs. Chance Brothers of Birmingham) directly from the native carbonate of magnesia, known as magnesite. This mineral, which occurs in abundance in the island of Eubœa, and is exported thence, contains, in addition to carbonate of magnesia, from three to four per cent. of silica, with a little oxide of iron and manganese. The process consists in subjecting it to the action of sulphuric acid, by which the carbonate of magnesia is converted into sulphate, while the silica remains undissolved. By having the mineral in excess and the addition of a little magnesia to the liquor, the complete separation of the iron and manganese is gradually effected. The solution of sulphate of magnesia being thus obtained of the required purity, is evaporated and crystallized in the usual way. The production of Epsom salt from these works averages 800 tons annually.

At the Jarrow Chemical Works, South Shields, where Epsom salt is produced to the extent of 1,000 tons annually, the material employed is the impure sulphate of magnesia, technically known as Rough Epsoms, which crystallizes from the residual liquors of the Yorkshire Alum Works. This impure salt, which contains a variable proportion of sulphate of iron, is dissolved and treated with calcined magnesian limestone, by which the iron is completely precipitated; the clear solution is then evaporated and crystallized.

Calcined magnesia and carbonate of magnesia are displayed by several exhibitors, but call for no particular remark. A solution of carbonate of magnesia in carbonic acid water (bicarbonate of magnesia) is a popular and useful domestic medicine.

Citrate of magnesia, the basis of the limonade purgative of continental pharmacy, is exhibited in several collections ; the best, in our opinion, is that made by the process of Robiquet, which consists in mixing carbonate of magnesia (63 parts) with citric acid (100 parts) dissolved in a small quantity of water, taking precaution to avoid any elevation of temperature. The product, which has to be dried in a stove, constitutes a light, spongy, brittle mass, readily soluble in water.* The so-called effervescing citrate of magnesia, though an elegant preparation, has no claim to the title it bears, as it is a mixture of tartaric acid and carbonate of soda, sometimes containing in addition a little sulphate of magnesia.

Alumina.—Numerous samples of alum, some of them very large and striking, are contributed by both British and continental manufacturers. Most of these samples have a composition which is not that of the alum of former times, but are alum in which the sulphate of potash is replaced more or less completely by sulphate of ammonia. Such alum is to the eye precisely similar to potash-alum, and for most purposes to which the salt is applied is found equally valuable. The change in composition is due to the fact of the ammonia of gas-works being in most localities a cheaper ingredient for combining with the sulphate of alumina than a salt of potash, for which latter it is therefore substituted. The potash present in the alum is in some instances, we believe, entirely due to the mineral from which sulphate of alumina is extracted ; but in many cases it has been added in the form of chloride of potassium. As examples of alum entirely devoid of ammonia, the samples contributed by Messrs Maraspin of Trieste, and by the Alum Works of Tolfa, near Rome, may be mentioned.

c. Metallic Preparations.

Manganese.—The unstable constitution of the alkaline manganates and permanganates, and the remarkable facility with which they impart a portion of their oxygen to other bodies, has led to their employment as deodorizers and disinfectants. Brought into contact with putrefying organic matter, these manganese salts, by their rapidly oxidizing powers, effect a change analagous to combustion, as is evidenced by the removal to a great extent of the fœtid odour which such matter evolves. In this respect they resemble chloride (hypo-chlorite) of lime ; which, however, owing to the gaseous matter it evolves, has the advantage of coming more readily into contact with the gases of putrefaction and other offensive exhalations diffused through the air. On the other hand, it has been observed by the advocates of manganese that this evolution of gaseous chlorine is sometimes an objection to the use of chloride of lime ; that the permanganates are free from such inconvenience, and that from their colour they are not liable to occasion accident through being mistaken for other liquids. Various preparations, illustrating the employment of the alkaline manganates and permanganates, may be seen in the case of Mr. Condy of Battersea, a manufacturer who has introduced these substances as hygienic agents into commerce.

Antimony.—The medicinal preparations of this metal do not call for much remark. The Jury have observed a few specimens of golden sulphuret of antimony, kermes mineral, and iodide of antimony, all of good appearance. Emetic tartar—to medicine the most important of all the antimonials—is now manufactured upon a large scale, being used in conjunction with tannin, for fixing aniline colours upon cotton : it is shown in the Exhibition in crystals of unusual magnitude.

Bismuth.—The commonest manner of administering this metal is in the form of subnitrate, prepared by throwing crystals of the acid nitrate into water, and collecting the precipitated sub-salt. In this process a certain amount of the nitrate is held in solution by the water, and has to be recovered by a further operation; and, moreover, the precipitated sub-nitrate is usually so crystalline that it requires levigation before it is in the best condition for administration. These objections do not occur in the manufacture of carbonate of bismuth, using carbonate of soda for precipitating the nitric solution ; and carbonate of bismuth is now frequently used in England in place of the sub-nitrate, all the medicinal effects of which it is said to be capable of producing.

Tannate of bismuth was recommended by M. Cap, of Paris,† who states that it has proved remarkably efficacious in the treatment of diarrhœa. But few trials of it have been made in this country.

Zinc.—The salts of zinc, as sulphate, chloride, and acetate, are well exhibited, but demand no particular comment. A solution of crude chloride of zinc is sold as a deodorizer of the foul water of sewers, cesspools, &c., and is also used as a preservative for wood and cordage.

---

* "Pharm. Journ. and Trans." vol. xv. (1855-6), p. 184.

† "Bulletin de l'Académie Impériale de Médécine," Nov. 1859.

Oxide of zinc is ordered in the London Pharmacopœia to be prepared by decomposing the basic carbonate by ignition; so prepared, it constitutes a yellowish-white powder, completely and readily soluble, without effervescence, in dilute sulphuric, nitric, or hydrochloric acids. Another form of oxide of zinc, frequently sold, and preferred by many on account of its whiteness and its lower price, is prepared by decomposing a sulphate or chloride of zinc by ammonia, and washing and drying the precipitate. This substance is not, however, true oxide of zinc: if it has been prepared (as actually directed in the London Pharmacopœia of 1824) from sulphate of zinc, it is a basic sulphate containing thirty-six per cent. of sulphuric acid and water; while, if it has been prepared from chloride of zinc, it is a basic chloride. The basic carbonate of zinc is also sometimes sold for oxide. Such substitutions are by no means allowable.

Cadmium.—The iodide and bromide, both very beautiful salts, used chiefly in photography, are exhibited by several manufacturers. The iodide is occasionally employed in medicine in the form of an ointment, which is said to have the same effect as one of iodide of potassium.

Lead.—Although acetate of lead belongs rather to technical than pharmaceutical chemistry, it may be allowed us to notice the magnificent specimen of this salt, sent from the Melincrythan Chemical Works. We find commercial acetate of lead of excellent appearance shown by several German exhibitors.

Iodide of lead, from its beautiful colour, and the facility with which it is prepared, occupies more room than its importance deserves: a similar remark may be applied to biniodide of mercury.

Cerium.—The introduction into medicine of this metal, like that of chloroform, is due to Dr. J. Y. Simpson of Edinburgh. This physician has used the nitrate of cerium and the oxalate of the protoxide: the latter, which is now principally employed, is administered as a remedy for obstinate vomiting in pregnancy, in the dose of one to two grains three times a day. Oxalate of cerium, which, as found in commerce, has been stated frequently to contain lanthanum, may be extracted, by a somewhat lengthy process,* from the Swedish mineral cerite, a basic hydrated silicate of the metals of the cerium group—cerium, lanthanum, and didymium. Oxalate of cerium, which is a white powder, is exhibited by Marquart of Bonn, Lamatsch of Vienna, and Morson and Hopkin of London.

Iron.—The medicinal products of this metal are exhibited in great variety. As the basis of all, we find the protosulphate, of which there are numerous excellent samples from all quarters. Metallic iron reduced by hydrogen, the black oxide, the peroxide, sulphuret, perchloride, iodide, bromide, arseniate, pernitrtate, peracetate, lactate, valerianate, potassio-tartrate, ammonia-tartrate, and ammonio-citrate are each abundantly represented. These preparations, many of which are contributed by all countries, from Brazil to Turkey, are generally of excellent quality. We may remark in passing, that the iodide preserved from oxidation in a saccharine solution (syrupus ferri iodidi) does not appear to be so highly appreciated upon the Continent as it is here. We may also observe that the valerianate of iron, generally found in commerce, is not the extractiform substance perfectly soluble in spirit of wine, which is produced when valerianate of soda is exactly decomposed by a persalt of iron. It is, on the contrary, an amorphous rust-coloured powder, very imperfectly soluble in spirit.

In addition to the ferruginous preparations already mentioned, which are most of them well known, and which one would think ought to fulfil every possible indication, we find a considerable number of which the introduction, or proposed introduction, is recent. We allude to such compounds as the following:—citrate of iron and strychnia, citrate of iron and quinine, citrate of iron and quinidine, citrate of iron and cinchonine, citrate of iron and zinc, citrate of iron and manganese, lithio-citrate of iron, pyrophosphate of iron and quinine, &c. These preparations, which emanate from various laboratories, are non-crystalline, but in the form of beautiful shining scales, an appearance so attractive that their really objectionable character is apt to be overlooked. When we consider the advantage of having chemical medicines of definite composition, and that this composition should be easily determinable, we think it will be seen that the use of compounds such as we have just enumerated should be strongly discouraged. Citrate of iron and quinine, although an elegant and now established medicine, is one which has been the object of so much sophistication, that we are ready to think it were better if it had never been introduced. The absence of any authoritative formula for its preparation, and the practical difficulty of quickly and accurately determining its composition, together with an unscrupulous competition in price, have contributed to render it, as found in commerce, an extremely variable compound.

---

* Mayer in *Chemical News*, June 30, 1860.

The citrate of iron and strychnia is a preparation no less exceptionable. Strychnia is an agent of such potency that its purity and definiteness are of the highest consequence. Fortunately there is no difficulty in obtaining it pure, and in demonstrating its purity. But can the same be said when it is combined with citrate of iron? Can one pharmaceutist in a hundred determine that the citrate of iron and strychnia which he purchases has the exact composition its label professes? Must he not accept it upon the good faith of the vendor? That this salt is a chemical compound, and that the strychnia which it should contain to the extent of one per cent. is anything else than a mixture, no one, we imagine, would venture to assert.

Our objections to the other combinations of citrate of iron are of the same character. They are naturally indefinite in composition, do not admit of very easy analysis, and present no advantage which would not be obtained by administering the ferruginous salt with any particular adjunct the prescriber might consider desirable.

Mercury.—General collections of the medicinal salts of this metal are exhibited by Messrs. Howards and Sons of Stratford, Messrs. May and Baker of Battersea, Messrs. Davy, Mackmurdo and Co. of London, and Dr. Lamatsch of Vienna; small collections and single specimens are shown by numerous other exhibitors.

Calomel.—Among the specimens in an unlevigated state, there is none to surpass in size and beauty the mass displayed by Messrs. May and Baker. We may observe, however, that much of the calomel found in commerce is prepared by a process of sublimation which renders unnecessary the levigation which is requisite for that sublimed in a massive form. The former variety of calomel is whiter than that which consists of the pulverized crystals.

(*To be continued.*)

AN OLD CHEMIST ON THE PHARMACEUTICAL SOCIETY.

We have much pleasure in reprinting the following letter from the columns of the *Manchester Examiner and Times*. The name of the writer will be familiar to our readers, as it is one that gives dignity to the calling of the Chemist and Druggist. As a scientific author of some eminence, the writer is peculiarly well-qualified to estimate properly the vaunted superiority of members of the Pharmaceutical Society over those who, through inclination or various circumstances, have kept without the pale of that most unsatisfactory organization.

Sir,—Your paper lately contained a letter from a Mr. Watts, in reference to the late meeting of Chemists and Druggists at the Town Hall, in which my name was freely used. It is so full of inaccuracy, and characterized by so much false assumption, that I am compelled reluctantly to ask permission to reply to it. My reluctance arises not from any difficulty in dealing with his misrepresentations, but from the ridiculously supercilious style which he has assumed towards his fathers and brethren in the trade; and is a feeling which will arise in the mind of any one who has to deal with an opponent who sets fire to his chimney for the sake of the smoke; or imports into the controversy impertinent personalities. Such I take to be Mr. Watts's remark, that he "trusts Mr. Slugg's inaccuracy in statistics is no test of his business qualifications." I think those who are most interested in this will grant that I can afford to let that pass for what it is worth. Whether my statistics are wrong remains to be seen.

In order that there may be no mistake as to my own position in this controversy, I must be allowed to state that I was bound as an apprentice for five years to the business in question in the year 1829, long before the establishment of the Pharmaceutical Society, in one of the first establishments in this city, where I afterwards remained an assistant for three or four years, and have had the experience of a quarter of a century in the duties of a Chemist and Druggist. About twenty years ago a few men in London originated a society of Druggists, called the Pharmaceutical Society. They obtained an Act of Parliament, empowering the members of the said society to call themselves Pharmaceutical Chemists. The act provided that all Chemists and Druggists then in business might, if they pleased, enrol themselves as members without any examination or question. There was some talk of a benevolent fund, about which, I believe, the less now said the better. Membership of the said society, so far as concerned all those who were then in business as Druggists, was made to depend simply and only upon an annual money payment in return for the said benefit. The promoters came down into the country, and invited the Druggists to join them. Some did, whilst the greater number declined; and they no doubt expected they had as much right to do so, without fear of punishment, as others have in matters ecclesiastical. The society was established on a wrong basis. Had the act provided what I advocated at the late meeting, what I have always advocated, and what the "United Society of Chemists" is advocating, viz., that no one should be allowed in future to engage in the dispensing of medicines or sale of drugs, unless he had served a five years' apprenticeship, and had passed a satisfactory examination proving his ability to read and understand a Latin prescription, and his knowledge of the doses and properties of medicines, &c.—I say, had the society started on some such basis as that, its success would have been complete. As it is, its present position indicates anything but success, it being nearly on its last legs. I acknowledge that some very respectable men joined it, and are at present members of it; but I maintain that men equally competent, respectable, and intelligent, refused to join, and are not members of it, whilst others who are members, and style themselves "Pharmaceutical Chemists," are quite as incompetent and quite as ignorant as any non-members. Membership of that society is no test of competency, save in the case of the small number of 290 (not 390, as I inadvertently said at the Town Hall); and this is the point about which Mr. Watts has—Birkenhead like—set fire to his chimney. Members who have been for twenty years paying their annual guinea, finding that they till now got nothing in return but a name, endeavour to turn their privilege to some account by persuading the public that they are better qualified than their brethren for the duties of a Druggist's shop. This is the fallacy which pervades Mr. Watts's letter. He speaks of the "jealousy" excited among "non-scientific Chemists," most unfairly insinuating two palpable untruths —1st, That all members of the Pharmaceutical Society are scientific men; and, 2nd, That all non-members are unscientific; one of the most daring fallacies ever uttered. How can the payment of a guinea a year (*per se*) make a man scientific? Pharmaceutical logic argues it can. And here let me say that it is equally unfair to call the feeling which exists in the minds of non-members one of jealousy. It would be just as honest to say that, before the passing of the Reform Bill, Manchester was jealous of Liverpool because the latter sent members to parliament, whilst the former did not. Manchester was not jealous of Liverpool, but said that it was right that Liverpool should send members, but it was not right that Manchester should be denied the privilege. So here we say that it is right those Druggists who are members of the Pharmaceutical Society should be exempt from serving on a jury, but it is "unsound in principle and unjust in practice" that their equally competent brethren should not possess it also.

In proof of what I have said as to the fallacy of supposing that a mere money payment can supply either brains or competency, let me give two instances merely as samples. In a town about a hundred miles from Manchester there lives a man who was originally a porter to a surgeon; becoming acquainted with the names of drugs, he opened a Druggist's shop, and, being in business as such at the time the act was passed, he enrolled his name, and became by law "a Pharmaceutical Chemist." Some few years since, that man, through ignorance—not carelessness, but ignorance—dispensed a wrong medicine, which resulted in the death of a fellow-creature. The other instance partakes more of comedy than tragedy. In a town not a hundred miles from this lives "a Pharmaceutical Chemist," who two or three years ago distributed, gratuitously, a handbill, on one page of which he puffed off some wonderful pills he had discovered, and on the other he printed an almanack, which contained the usual indication of the dates of national events, such as the battle of Waterloo, &c.; but, as there were some blank spaces, being a "scientific" man (*par excellence*), he filled up his blank spaces thus: April 1st, take three pills; November 5th, take one pill; December 8th, take two pills; and so on. Here is scientific pharmacy! And Mr. Watts can hold up such men as these to the public as scientific men, whilst such men as myself are represented to be "non-scientific," ignorant, and incompetent; calling our claim to be considered "equally qualified," presumptuous. Thank God, some of us are rather "unequally qualified."

Allow me to point out one other flagitious instance of false assumption, evidently written with an intention to deceive. Mr. Watts says, "The public will not, perhaps, agree with Mr. Slugg that it is 'an artificial distinction,' on which the saving or sacrifice of human life may depend." Now, Mr. Watts knows as well as I do, that the words "artificial distinction" referred not to the 290 examined members, but to the 1,660 members who have never been examined. Will he show what other distinction than an artificial one there exists between these 1,660 and other members of the trade? The ominous words, "saving or sacrifice of human life," are evidently used to raise a puff of smoke. The public are, of course, very sensitive on such a subject; and this is an unfair attempt to lead them to suppose that I think lightly of it. I have already shown that the distinction is artificial, and that it has nothing to do with the "saving or sacrifice of human life." I have, for the sake of argument, allowed the competency of the 290 examined members; but I deny that it is a logical sequence that a non-examined member may not be equally competent; for, 1st, a man may acquire a very extensive knowledge of any science, though he may not be examined upon it; and, 2nd, there are other qualifications besides knowledge requisite to make a good Druggist, such as experience, care, fidelity, strict attention, and moral tone. I say, besides knowledge, I do not exclude it; and it is possible that a man may have a little theoretical knowledge, and be destitute of every other qualification. However, excluding the 290, which include all the examined members in the whole of Great Britain, all the rest of the trade, notwithstanding the "artificial distinction" of a name, are on one common level of position. And now, touching my inaccuracy in statistics, I said at the meeting there were only 390 members examined in the whole of Great Britain. I have acknowledged an error of 100 against myself. Mr. Watts, in the rudest manner possible, denies my statistics, and says the number is upwards of 650. I place in your hands the latest authentic list, and respectfully ask you to say who is right.—I remain, your obedient servant,

October 20, 1862. J. T. SLUGG.

THE MONTH

United Society of Chemists and Druggists.—A meeting of this society was held on Wednesday, the 15th ult., at the Manchester Town Hall; the Mayor (T. Goadsby, Esq.) in the chair; to consider that portion of the Juries Bill which relates to the exemption of members of the Pharmaceutical Society from service on juries.—Mr. Buott said he objected to the clause on the principle that, as a matter of public utility, the Druggist should be behind his counter, and not in the jury box. That principle had been recognised by Parliament, but the partial application of it, in favour of the members of the Pharmaceutical Society only, constituted the present grievance.—Mr. Alderman Bowker, in proposing a formal motion to the above effect, said that some definition was necessary in styling the trade. At present, anybody who chose to vend drugs with his other wares might call himself a Druggist; but he was hardly a man competent to fill the responsible duties behind a Druggist's counter. He urged all respectable and duly-qualified men in the trade to organize, with a view to appeal to Parliament, and secure the same immunity as that enjoyed by members of the Pharmaceutical Society.—Mr. Slugg, in seconding the motion, characterized the Pharmaceutical Society as a small body of men in the trade, who by intrigue at the fag end of the session contrived to obtain a privilege not extended to the trade in general. Of 40,000 Chemists and Druggists in England, only 2,000 were members of that society, of whom only 390 obtained their membership by examination, while the remainder obtained it by a mere money payment. In Manchester and Salford there were upwards of 250 in the trade; but of that number only 44 were members of the society, of whom only 10 had passed an examination.—Mr. Bowers denied the charge of intrigue, and deprecated expressions of antagonism as he had heard applied to the society.—Several other persons having addressed the meeting, the Mayor advocated the necessity of establishing amongst the trade the practice of a five years' apprenticeship, which would go a long way to secure the necessary ability to conduct the business of a Chemist and Druggist properly. Efforts of this character would elevate the position of the trade, and secure a parliamentary privilege granted to others. He felt the desirability of united exertion, and having been upwards of forty-five years in the trade, his sympathies were of course very much with his brethren.—The motion was passed unanimously, and the proceedings terminated by a vote of thanks to the executive committee and to the Mayor.

Several meetings of the committee have since been held, and an address has been agreed upon, which is about to be distributed to members of the trade throughout the district, setting forth the objects of the society, and inviting co-operation.

United Society of Chemists and Druggists, Bath.—At a meeting of the Chemists and Druggists recently held in this city, it was unanimously determined, after considerable discussion, to petition Parliament, on its re-assembling, to extend the privilege of exemption from serving on juries to the entire body of Chemists and Druggists throughout the kingdom; a privilege sought for not on the ground of mere personal convenience, or from the desire to shirk the duties incumbent on all good citizens, but rather with a view to secure the public from the chance of a recurrence of those painful accidents which we occasionally, although rarely, thanks to the skill and care manifested by this intelligent body of men, read of in the public journals.—*Bath and Cheltenham Gazette.*

Medical Men and their Poor Patients.—On the 5th inst., at Finsbury, an inquiry was held by Mr. H. Raffles Walthew, the deputy-coroner, touching the death of Richard Clarke, aged two years. Mrs. M. Clarke said that on Thursday last her son became ill. He had received a fall some time before. On Friday morning, at half-past 3 o'clock, she noticed the child getting stiff, and her husband ran for Dr. Buss. The doctor did not come for some time. The delay was occasioned by his getting her husband to sign a paper binding himself to pay 5s. The child was dead when he did come. The witness's husband was a mechanic. Mr. Henry Buss, M.R.C.S., said that at the time in question Mr. Clarke called him up, and told him he was wanted to see the child; but did not say it was dying. Witness said, "Are you prepared to pay? Have you got 5s.?" The father said he had not, and witness asked him for some security. The witness wrote out the following:—"I promise to pay Dr. Buss 5s., for visiting my child." When the father affixed his mark to the promise witness went to see the child, whom he found dead. Witness was paid the 5s. on Saturday night. He was obliged to act thus to guard against imposition. He had to live by his profession. Those who could not pay ought to apply to the parish doctor. If a person asked him to go purely as an act of charity he would attend. The deceased died from effusion on the brain. The coroner, having summed up, remarked that the course pursued by Dr. Buss was not peculiar to that gentlemen. The jury returned the following special verdict, "That the deceased died from effusion of serum on the brain; and the jury desire to express their regret that medical men should refuse to attend the poor without guaranteed payment. The jury consider that as such refusals are frequent, the parish authorities should take it upon themselves to pay the fees for first visits of medical men to poor persons in urgent cases; and the jury are of opinion that such a provision would be the means of saving life." In an excellent leader on this case, the *Morning Star* considers that the surgeon's explanation of his conduct was quite reasonable, but at the same time thinks that he would have done better to have gone at once and taken his chance of a fee. The practical question,—How are doctors residing in poor localities to be paid?—is thus discussed by our contemporary:—

"With respect to the quite destitute sick, not in the workhouse, means might of course be adopted by which the parish should pay, at least for the first visits of the doctor; and subsequent attendance in such cases ought to be left to the parish doctor. But there is no reason whatever why a person in work and making wages, although small, should not, when he himself or any of his family fell ill, pay for medical attendance. It is just as right and reasonable that he should pay the doctor, if he wants one, as that he should the baker for his family's bread, or the tailor for their clothes. As illness, however, or accident comes suddenly, and doctors' fees, even where moderate, must make a heavy deduction from a working man's means, some other plan might be sought to this end than that of individual payments. Nor is such a plan difficult to find. We have it in the principle of co-operation, and something like it in practice is the existing friendly benefit societies which give money aid to their members when sick. The plan we suggest, however, would be simpler and more special: it is that of a mutual medical aid society, the members of which would contribute a small sum in proportion to the number of their family yearly, and be in return entitled to medical attendance and advice from the appointed or elected medical officer of the society, who should be paid a fixed salary for his services. Each such society should of course be of limited extent—at any rate its members should all live within a moderately-sized district, so that the doctor might be readily called. There are, therefore, ample room and ways enough for many medical aid associations in London. The clergymen of the various districts would, we believe, willingly take a share in the direction, and give the moral aid of their name and social position to the societies. In this way medical and surgical aid would be organized and economized; and the poor would have the satisfaction of knowing that they had always such aid at their command, and the additional satisfaction of knowing that they themselves paid for it. What is spent amongst the majority of that class on gin and beer in one week would be sufficient to pay the subscription to the Medical Aid Society for a year. Another evil would be avoided by the existence of these associations—that of being obliged to resort to persons who dispense medicines as well as give advice, and who are generally either unqualified to prescribe, or who at least have an interest in cramming as much medicine down the throat of the sick person as he can pay for. Even persons in a position, as respects means, above that of the working man, feel it expensive, first to take the advice of a competent medical man, and then go to a chemist and pay high for the medicine prescribed: so they resort to the dispensing surgeon. The medical aid associations would render that unnecessary. Each society would have its chemist, who would certainly make up prescriptions for it at least twenty-five per cent. cheaper than to individual customers. The principle of such associations is flexible: they might either be small or numerous, select or broadly inclusive; and may we not hope that the medical men in the metropolis will gladly co-operate in any effort to establish them?"

The late Mayor of Manchester.—Twelve months ago we presented our readers with a biographical sketch of Thomas Goadsby, Esq., one of the Vice-Presidents of the "United Society of Chemists and Druggists," on his elevation to the civic chair of Manchester. We have now the pleasure of recording the testimony of the City Council as to the ability and integrity with which Mr. Goadsby has discharged his duties. At the annual meeting of the Council, on the 10th inst., Mr. Alderman Curtis said it was his pleasing duty to propose a vote of thanks, which he was sure they would all feel had been well earned by the late Mayor. (Applause.) Twelve months ago, when he had the honour of placing the chain of office around Mr. Alderman Goadsby's neck, he told him that the period of office on which he was about to enter would have its troubles as well as its pleasures. At that time fear was expressed that great distress would arise out of the unfortunate disruption in the United States of America. Their worst anticipations had been realized, and the ex-Mayor had devoted a considerable period of time to organizing subscriptions for the alleviation of that distress. In another place he had received for his exertions in this particular, from gentlemen who were well qualified to form an opinion of his labours, a vote of thanks, which was moved by the Earl of Derby. (Hear, hear.) Mr. Alderman Goadsby had done all in his power to promote the success of the Great International Exhibition; and, though the lamented death of the late Prince Consort had had the effect of their not having among them so many illustrious strangers as might otherwise have been the case, yet, as in the case of His Highness the Pasha of Egypt, the ex-Mayor had nobly done the honours of the city. The munificent donation of a statue of the Prince Consort was a proof of the admiration he entertained for that illustrious Prince, as well as an honour to the city. His unbounded hospitality had been directed towards the promotion of good feeling amongst the inhabitants of the city, and of promoting a good understanding among neighbouring towns. Mr. Alderman Curtis moved :—

"That the best thanks of this Council be, and they are hereby presented to Thomas Goadsby, Esq., Alderman, for the ability, unwearied assiduity, and zeal with which he has performed the important and responsible duties which have devolved upon him as the Chief Magistrate of this city during the past year; for the benevolence, energy, and sound judgment with which he has aided and promoted all measures taken to alleviate the distress which unhappily prevails in the manufacturing districts; for his munificent contribution towards the erection in the city of a memorial of the late lamented Prince Consort, which shall be a fitting record of the affection and loyalty with which His Royal Highness was also regarded, and a lasting proof of the sincerity with which this community has mourned his death; for the interest he has taken in all local movements which have had for their object the promotion of the welfare and happiness of his fellow-citizens; for his ready aid and co-operation in all matters affecting this city connected with the Great International Exhibition; for his great hospitality and the personal kindness and consideration shown to every member of the Council; for the ability displayed in connexion with the arrangements made for the reception and entertainment of Said Pasha, the Viceroy of Egypt, and which secured for him so marked an expression of His Highness's gratification; and for the solicitude with which he has laboured to promote and conserve the most friendly intercourse with neighbouring boroughs."

The resolution was passed with acclamation. Mr. Goadsby acknowledged with a modest but suitable speech, in which he enumerated the many difficulties he had had to contend with, and expressed the gratitude he felt towards the members of the Corporation for the support they had lent him during his term of office. He had only to add (he said) that he had done all that in him lay, during the year and one day in which he had filled the office of Mayor, to support the hospitality, honour, dignity, and importance of the Manchester Corporation—(applause);—and he believed that he had handed over the office to his successor untarnished in honour and unspotted in reputation. (Cheers.)

Poisonings.—*By Arsenical Artificial Grapes.*—On the 16th ult. Mr. John Humphreys, the coroner for East Middlesex, resumed the inquiry respecting the death of Elizabeth Anne Abdalla, a girl aged fourteen years, who was supposed to have died from the effects of sucking artificial flowers. It appeared from the evidence given on a former occasion that the deceased was, on Sunday, the 20th September, taken suddenly ill with pains and cramps in the stomach, and died the next morning. Mrs. Abdalla, the mother of the deceased, stated that her daughter and another girl had been out walking together, and that the other girl had given deceased some artificial flowers which she had been made a present of by her mistress, who was a milliner. The deceased, her playmate said, sucked only one green artificial grape. Mr. Chandler, M.R.C.S., made a *post mortem* examination, and found that the coatings of deceased's stomach were ulcerated, and that there were traces of an irritant poison. The inquiry had been adjourned for the purpose of getting Dr. Letheby to make an analysis of the contents of the stomach, and also the artificial flowers, to ascertain whether they contained arsenic. Dr. Letheby said that he made an analysis of the contents of the stomach, and found that the liver contained arsenic to the amount of three grains. The tissues of the stomach contained no poison, but the stomach itself was of a dark red colour, as if from irritation. The bile and liver had absorbed the poison into the system. The colouring matter of the artificial leaves and grapes was analyzed. The blue and pink kinds contained no poison, but the green ones were covered with arsenical green, arsenite of copper. Ten grapes contained three grains of poison. He produced a specimen of the metallic arsenic obtained from a single grape. The artificial leaves are also stained with arsenical green. Each leaf contains about a grain and a-half of poison. The quantity of poison contained in a leaf is perhaps sufficient to kill a child. He had heard from Mr. Chandler a statement of the case, and he (Dr. Letheby) attributed deceased's death to poison. In November, 1861, Dr. Letheby heard of a similar instance, that of two children who kept their toys in a cupboard lined with green paper. Both were taken very ill, and one died. Upon making an analysis of the paper he found six inches of it to contain thirteen grains of arsenic, a quantity sufficient to kill two persons. There are a number of different kinds of green sold, they contain from 58 to 71 per cent. of arsenic. In many cases the green colour is mixed with chalk and plaster of Paris to lower the depth of the colour. Arsenical green is used for paper toys, artificial flowers, and even ladies' dresses. A wreath of fifty green leaves contains enough to kill ten men, and a green tarletan dress of twenty yards contained 900 grains of arsenic. He had heard of several cases of this description, and thought that the public ought to take some precautions against them. The jury after some deliberation returned the following verdict:—"That the death of the deceased, Elizabeth Anne Abdalla, was caused through inadvertently sucking artificial grapes which contained arsenite of copper." The jury expressed a hope that some measures would be taken to prevent the use of arsenic as a colour.

Death of a Chemist by Prussic Acid.—On Tuesday, the 21st ult., an inquest was held at Alfreton, near Chesterfield, before Mr. Busby, coroner, on the body of Mr. Samuel Coates, druggist, who died on the previous Saturday under very extraordinary circumstances. It appears that deceased had lost several thousand pounds by the forgeries of Shaw, the Derby solicitor, who was committed for fifteen years' transportation at the last March assizes at Derby, and imagined that the loss would cause him to be greatly embarrassed. About ten days ago he attempted to poison himself with prussic acid, but by the timely administration of antidotes he recovered. The assistant after that time concealed all the prussic acid. On Saturday morning last deceased's son, a little boy, went to the privy, and found it bolted on the inside, but looked through a hole in the door, and from what he saw went and fetched the assistant, who, with the help of the apprentice, forced open the door, when a horrible sight presented itself. Deceased was lying on the floor; a pint bottle of "Scheele's strength" prussic acid was at his right hand, a large gash was cut in his throat, and a razor covered with blood was lying on the seat. He was removed to the house quite dead, and medical assistance sent for. It was found that he had not severed any of the main blood-vessels, but that he had drunk nearly half a pint of prussic acid, and must have expired instantly. Deceased's solicitor said that previous to the forgeries by Shaw, Mr. Coates's property was worth £9,000, and after discharging all losses occasioned by the forgeries he was worth £5,000, so that his idea (which caused his death) that he was in difficulties was entirely erroneous. A verdict was returned, "That the deceased died from the effects of a large dose of prussic acid, which he administered to himself while in a state of temporary insanity."

By Aconite.—Carelessness of a Chemist.—On the 5th inst., an inquest was held at Cardiff, before Mr. R. L. Reece, coroner, on the wife of Henrich Kegebein, of the firm of Kegebein and Beym, ship-chandlers, who had died the previous day from the effects of poison accidentally administered in medicine supplied from the shop of Mr. Franz Carle Reinecke. It appeared that deceased ordered a bottle of sarsaparilla and a box of strong purgative pills from Mr. Albert Reinecke, the chemist's brother and assistant, who prepared the pills, as he thought at the time, with one grain of calomel, one grain of scammony, one grain of extract of wormwood, and one grain of powdered root of marshmallows. Deceased took the pills about 11 o'clock on Tuesday morning, complained of illness early in the afternoon, and expired about 4 o'clock, with every appearance of having died from the effects of an irritant poison. The *post mortem* examination proved that death resulted from poison, and at the inquest Albert Reinecke confessed that he used extract of aconite instead of absinthe in preparing the medicine. The coroner, in summing up the evidence, said there was no doubt at all as to the cause of deceased's death, and the jury had to decide what amount of blame, in their opinion, was attached to Albert Reinecke, for there was nothing at all against the chemist himself. There was no pretence for saying that the poison was used otherwise than in error, and the only question was whether the carelessness amounted to a crime, or was merely censurable. If it were reckless carelessness it might amount to manslaughter, but this did not appear to the coroner to be such a case as that. From the evidence, and from the manner in which Messrs. Reinecke had given their evidence, it rather seemed to be one of those deplorable accidents which might sometimes happen in the case of a well-qualified man. The jury consulted for nearly a couple of hours, and at midnight returned a verdict of "Accidental death," accompanied with a censure upon the brothers Reinecke, and a caution as to their future carefulness in preparing medicines. The case created much excitement in the neighbourhood, and seven or eight medical gentlemen attended the inquest.

By Strychnine.—Carelessness of a Doctor's Assistant.—On the 6th instant Mr. Reed, the coroner for South Northumberland, held an adjourned inquest in the Town-hall, North Shields, on the body of Mrs. Jane Gilhespie, wife of Martin Gilhespie, a mariner. It appeared that the deceased, for some three weeks before her death, had been suffering from disease of the lungs, and had attended the surgery of Dr. Fenwick, who had prescribed for her. She had taken two bottles of medicine, and on the 10th of October had procured a third. The day following she began her usual household work, and between 9 and 10 o'clock in the forenoon she took two spoonsful of the medicine from this bottle. She was immediately attacked by an alarming illness. Her hands became clenched, and her toes were also drawn up upon the soles of her feet, and her back became bent. She appeared to be in great agony, and died within an hour and a quarter of her first attack. Dr. Fenwick and his partner, Dr. Peart, made subsequently a *post mortem* examination of the body; Dr. Fenwick making out a certificate for the Registrar of Deaths afterwards that the deceased had died of an attack of bronchitis and congestion of the lungs. After the funeral of his wife, however, Gilhespie had submitted a portion of the contents of the last bottle of medicine, alleged to have been procured at Dr. Fenwick's surgery, to Mr. Pattison, a chemist at Newcastle-on-Tyne, and that gentleman, after analyzing it, gave a certificate that it contained one grain and a quarter of strychnine to the fluid ounce. Having received this certificate, the coroner gave an order for the disinterment of the body and a second *post mortem* examination. It was exhumed in the presence of Dr. Newton, of Newcastle, and several other medical men, who made a second *post mortem* examination. The body was found to be tolerably healthy, with the exception of the brain and a portion of the spinal cord. Portions of the viscera were placed in jars and sealed, and delivered to Mr. Pattison. Some of the medicine was subsequently administered to two rabbits, half an ounce to one, and about 40 drops to the other. The first died of tetanic convulsions in two minutes, and the other in a similar manner in five minutes; and a drop of an acidulated solution of the residue from the stomach and duodenum brought in contact with the skin of a young frog produced violent convulsions. Three or four additional drops were applied, with intermissions, and it died at the expiration of half an hour. As the result of the analysis, experiments with portions of the stomach and duodenum of the deceased showed the strychnine colours distinctly. Dr. Newton made an elaborate report to the coroner's court. He said he was of opinion that deceased had died from the effects of strychnine; Dr. William Murray, demonstrator of anatomy at Neville Hall, Newcastle, expressed the same opinion. Dr. Fenwick made a lengthened statement on oath to show that the appearance of the lungs was such as to warrant him in giving the certificate that the deceased had died from the effects of congestion of the lungs. If the death of Mrs. Gilhespie had arisen from strychnine from a bottle sent by mistake from his surgery, he said he could only account for it by the fact that one of his dispensers must have mistaken a bottle containing that poison in solution for a bottle containing a solution of antimony. Both bottles were marked "poison." The prescription Dr. Fenwick sent to the surgery to be made up for Mrs. Gilhespie on the 10th of October was as follows:—2 grains of tartar emetic, 1oz. of Epsom salts, sufficient spirit colour to colour the mixture, and 8ozs. of water.

Crimes and Misdemeanours.—*Wilful Damage to an Omnibus.*—Mr. Robert Stafford, chemist, No. 46, Crescent-street, New-road, and Emily Clements, were charged lately with the following offence:—Conductor 1,616, of one of the London General Omnibus Company's omnibuses, said he took up the defendants in the Euston-road, and, when the omnibus got to the hill in Piccadilly, and was descending, the defendants asked to be let out. He told prisoners, in consequence of the slippery state of the road, he could not stop the omnibus just then, upon which the defendant immediately smashed one of the windows. As soon as the omnibus could be stopped he asked the defendant to pay the damage, 8s. The defendant refused, and also repeated his refusal to a police-serjeant who came forward. He was obliged to give the defendant into custody, upon which the defendant made use of the vilest language, and resisted and assaulted the police-sergeant. Police-serjeant Curme, C 19, said the prisoner was very violent, and evidently the worse for liquor. When he took them into custody, the female defendant called out, "Smash him!" The male prisoner then struck him several blows, and tried to kick him on the lower part of his person. The woman was also very violent, and, being also the worse for drink, she too was taken to the station-house. Both defendants pleaded that they were too much intoxicated to remember anything that had happened. The magistrate, Mr. Knox, fined the woman 20s., or seven days, and the man 1s. and the amount of the damage; also, for the assault on the police-serjeant, one month's imprisonment without a fine.

Juvenile Burglars.—John Marchant, aged 15, errand-boy, and Christopher Wood, 17, also an errand-boy, were charged at the Marylebone Police Court, on the 19th ult., with burglariously breaking and entering the dwelling-house, 38, Duke-street, the premises of Messrs. Hocken, Wilson, and Hocken, export druggists, and stealing the sum of £17,

&c. Robert Everard Bull deposed: I am clerk to Messrs. Hocken and Wilson. On the evening of October the 3rd, I placed £10 in gold in a cash-box, and delivered it to Edward Kitchen, a man in the same employ, to put in the safe. The following morning I found the cash-box had been forced and all the money taken.—William Lambert Preston, in the same employ, stated: On the night of Oct. 3, I had in the drawer my day's takings, amounting to £7 10s. 6d., which I locked up and placed in the safe at night. In the morning the safe was broken open and the money gone.—Francis Edward Kitchen, warehouseman, said: On the night of the 3rd inst., shortly after eight, I took the boxes from the drawers in the shop, and various packages of money, and a cash-box and several books, and placed them in a safe and locked it, and put the key in a drawer in the shop. In the morning many drawers were found open, and the one from which the key had been taken. There was also a chisel found.—Edward White, serjeant, 16 D, stated: From information I received I went to Gravesend, where prisoners were handed to me by a serjeant of the local police, they being in custody on another charge. I told both the charge upon which I took them, and they made no reply at the time; but on the way to London they were going to speak, when I cautioned both, and Marchant heard the prisoner Wood ask what he thought he should get. I told him I did not know. Marchant said, "It won't be above two years in a reformatory, and when I come out I shall be about seventeen years and a half old." Wood said, "If I get sent to a reformatory, I shall only be nineteen years and a half when I come out." Wood also asked if he was sent to a reformatory what one it would be. I said it would be to Feltham. The cash-box which I received from Mr. Hocken had been forced open, evidently by a chisel. There is an officer here, sir, from the P division, who identifies some of the property found on them as being the proceeds of a burglary at Mitcham, in Surrey; and it is wished that, as this case is here, you will take the other as well. I have also information that they left a number of things at Margate, and I believe that something further will arise from them against the prisoners. On the prisoners being searched, a coat, a powder-flask, two silver watches and guard chains, wax tapers, matches, purse, three knives, a loaded pistol, box of percussion caps, shot, and several handkerchiefs were found. The prisoners were remanded.

NOTES AND QUERIES

Chemical Equivalents.—J. H., finding that writers on Chemistry differ in the chemical equivalents, wishes us to name the best authority. We think he will find that the equivalents given in most recent books correspond, except in a few cases. Those writers who regard water as a compound of two equivalents of hydrogen with one equivalent of oxygen, make the equivalent of the latter 16; while those who consider it as a compound formed of a single equivalent of each element necessarily retain the old equivalent of oxygen, 8. According to the first view the symbol of water is H_2O; according to the older and more general view it is HO; but as the former represents the numbers $2+16$ and the latter $1+8$, they express precisely the same proportional weights. A few elements besides oxygen have lately had their equivalents doubled. You cannot adopt a better series of equivalents than that given in the last edition of Fownes's *Manual of Chemistry.*

Liquor Opii Sedativus (S. C. S.)—Cooley gives the following formula:—Take dry opium (Smyrna) in powder 1 part, clean washed (silica) sand 2 parts. Mix and moisten with water, introduce into a percolator, and pass aq. dest. at 65° or 70° F. through the ingredients until it passes both tasteless and colourless. Evaporate the liquor (by steam or water bath) to the consistence of a hard pill extract. Take of this hard extract ℥iij. and aq. dest. f. ℥xxx. Boil for two minutes; let it cool; filter; then add rectified spirit f. ℥vj. and aq. dest. q. s. to make up nearly f. ℥xl., or one quart.

French Diaphanous Pomade.—J. N. would feel obliged to any one who would favour him with a receipt for this transparent pomade. Beasley gives the following receipt for a similar preparation:—*Crystalline Cream.*—Oil of almonds 8 ozs., spermaceti 1 oz.; melt together; when a little cooled, add ½ oz. or less of essence of bergamot or other perfume; put it into wide-mouthed bottles, and let it stand till cold.

External Applications for Sheep.—T. W. would be glad to hear of a useful and tried preparation for the scab or shab; also one for foot-rot. In Beasley's *Druggists' Receipt Book* 10 recipes are given for the former, and 12 for the latter.

Our Reviews.—We cannot find space in the present number for any reviews of books.

*** We cannot undertake to attend to anonymous communications, or to answer queries through the post.

Correspondence

To the Editor of the Chemist and Druggist.

PRIVATE MARKS ON PRESCRIPTIONS.

Kensington, October 27th, 1862.

SIR,—I omitted the following suggestion in my recent communication, in consequence of its monopolizing length, thinking I had already encroached too much upon your valuable space, possibly to the exclusion of other correspondents. I now beg to claim your attention, and that of your numerous subscribers, to a long existing, I may say chronic evil, tending frequently to much perplexity on the part of the Chemist, and which I believe a majority will concur with me in thinking requires reformation, and which if reformed, would happily be the means of effecting that great desideratum, a uniformity of charges amongst Chemists and Druggists, so far as that most important branch, *dispensing*, is concerned. I allude to what I consider to be the reprehensible cunning, manifest in the adoption of private marks upon prescriptions. The experience of the whole fraternity will unquestionably carry confirmation, when I say they are frequently laid upon our counters, studded all over with eccentric combinations of vowels and consonants, hieroglyphically intended for shillings and pence. Now why should one Chemist, if his charges are fair, be desirous of keeping his contemporaries in the dark as to the value he has attached to a mixture or embrocation? It cannot be to blind the customer, for he will certainly be called upon to pay in the current coin of the realm. Of course, then, *unfraternizing* secrecy is the motive. And wherefore? I inquire, and fearlessly challenge the whole trade to give a *valid reason* for a practice so illiberal. Would it not be more in the spirit of liberality and progress to mark the charge openly, and thus escape the suspicion of being ashamed of our prices? Besides, the adoption of this "all fair and above board" system would not only lead to a uniformity of charges as regards prescriptions, but also put a stop to the not uncommon practice of unprincipled persons, who, for the sake of saving a few pence, at the expense of their veracity, will often exclaim, "Oh! I only paid so much where I had the medicine before." Thus the perplexed Chemist would be extricated from the "fix" which such an assertion too frequently places him in.

I was a short time since shown the keys to a select few of some of these hieroglyphics, comprising an amusing variety of sentences, varying according to the imaginative ingenuity of the firms adopting them. One struck me as wholesomely suggestive to the subordinates of the establishment, viz., "*Don't be lazy;*" but about another there appeared a sanctimonious solemnity ill according with its very secular application, it was to the effect, "*Let us pray.*" Now, without intending any uncharitable imputation, but solely in consideration of the fiscal dedication of the sentence, so covertly used, I could not refrain from giving the passage a new reading—"Let us *prey.*"

I beg to subscribe myself,
Yours very truly,
J. C.

THE VALUE OF THE PRICE CURRENT.

November 8th, 1862.

SIR,—I hope you will not deem me intrusive if I once more suggest the suppression of the monthly Price Current, which appears to me to be a most objectionable feature in your well-conducted little journal. I can assure you that the publication of the Price Current is offensive to the seller, and I think I am right in saying that it is useless to the buyer. Mind, I do not dispute its accuracy, for it seems to be very carefully compiled. I deny its utility chiefly on the ground that it only reports monthly the actual sales which may have been effected, and consequently cannot be depended on as a guide to the value of many of the articles enumerated. For instance, I may have bought the last parcel of a particular drug months ago, and the price I gave then would constitute the quotation given by you; but in consequence of the absence of the drug from the market since, its price may be materially modified by this time, and I have of course every right to take advantage of the state of the market. Having put this case to you, I will leave you to imagine how annoying it is to me to have your price quoted by customers against mine, and to be compelled to waste much precious time in explaining the discrepancy. The competition of the wholesale houses is such that the retailer cannot easily be charged an unfair price—at any rate, it is his own fault if he is overcharged a second time by the same house. Depend upon it, sir, that this competition is a much better safeguard for the retailer than your Price Current, which is necessarily to a certain extent misleading.

I advised you to discontinue the publication of the Price Current before the present volume of your journal commenced, and I cannot help thinking that you would have gained the good-will of many, and have offended none, had you adopted my advice. As you must now be making arrangements for your fourth volume, I trust you will seriously consider this second appeal. By all means retain your Trade Report, as it gives the journal a special character. This has hitherto been ably and faithfully prepared, and has given your readers all the information they could possibly have required.

The space gained by the omission of the Price Current might be advantageously filled with readable matter like the other pages of your interesting little journal.

Your well-wisher,
J. V. S.

A DISCOURSE UPON SPACE.

Dublin, November 12th, 1862.

MY DEAR SIR,—Your courteous reply to my somewhat savage letter has quite upset me, and I now feel like a naughty schoolboy who has received a cake from his master instead of a well-deserved hiding. The manuscript you returned has been consigned to the flames, for though you kindly offered to make use of it at some future time, I found, on counting the words in a page, as you suggested, that it would make about nine pages of the *Chemist and Druggist*, and I felt at once the necessity of re-writing it in a less diffuse style. When my modified article is ready, I will submit it to you, in the hope that you may find room for it some time between now and the end of next year. You bitterly complain of the small amount of space you have to deal with each month. Why cannot you double the space? At the present time your journal is not big enough for its place. It has undertaken to reform many abuses, to give information upon all subjects interesting to Chemists and Druggists, to convey the opinions of individual Chemists to their brethren, and to do battle for the rights of the whole class. Thirty-two pages exclusive of advertisements are not enough for a journal representing the general body of Chemists and Druggists, though I must admit that you, Mr. Editor, have the knack of packing facts very close together. The present subscription (five shillings a year) is absurdly low, considering the size of the journal and the quality of its contents. I believe you might safely increase the subscription, without increasing the size of the journal; but were you to do both, every subscriber would thank you.

Take my proposal into consideration before starting the next volume, for the alteration in size and price ought to be made at the commencement of the year. With double the space you, Mr. Editor, might do wonders. You might give us gleanings from all the British and Foreign Chemical and Pharmaceutical Magazines; you might give us extra leaders, essays, and reviews; more notes and novelties, fuller answers to queries, and all the more interesting items of news. Lastly, you might find room for an occasional article from your long-winded correspondent,

HIBERNICUS.

To the Editor of the Chemist and Druggist.

SIR,—In answer to the letter of M. Guerout, contained in the last number of the CHEMIST AND DRUGGIST, I beg first to withdraw the word "frightened." The nation that can count in its chemical ranks such men as Dumas, Wurtz, Berthelot, Menier, Kuhlmann, and a host besides, need be frightened of no other. What I meant to convey by this unfortunate expression (which M. Guerout should have taken *cum grano salis*) was this, that the French chemists had at first no intention of exhibiting scientific chemicals, but that, hearing or seeing that our scientific men were doing so, they added, into at least two cases, several specimens of such products. That the exhibition of M. Berthelot's "shining illustrations of the progress of chemistry," as M. Guerout truly calls them, was an afterthought, is to me clearly proved by the fact of their not having been placed in the case when first fitted up, and that the shelves containing them were put in a most unworthy, dark corner, and evidently not included in the original setting out and design. A parallel instance occurs in the case of M. Quenessen and Co., in Class 1, who even cleared away the receiver belonging to the splendid platinum retort exhibited by them, to make room for a series of raw metallic salts, placed there to emulate those contributed by Messrs. Johnson and Matthey.

In conclusion, I beg most heartily to express my regret that the paragraph written by me should have in any way offended the French chemists, for whom no one more than myself has a greater respect and admiration, and from whom, both during the Exhibition, and at every period of communication with them, I have received so much of that delicate attention and graceful courtesy that Frenchmen know so well how to bestow.

I am, &c.,
THE WRITER OF THE PARAGRAPH
IN QUESTION.

TRADE REPORT.

The state of business in nearly all departments of trade, owing to the distress in the manufacturing districts and the war in America, is very unsatisfactory; the trade only take for actual wants, and the shippers buy only for present orders. A fair business has been done in Tartaric Acid at 1*s.* 7¼*d.* to 1*s.* 7½*d.* More doing in Citric Acid at the reduced price of 1*s.* 6½*d.* Oxalic Acid moves off steadily at 8½*d.* for best. A few sales made in Sal Acetos at 10½*d.* Chlorate of Potass is quiet, at 1*s.* 2*d.* Soda Ash is dull at 2*d.* to 2¼*d.* Prussiate of Potass is quiet at 1*s.* to 1*s.* 0½*d.* Bichromate is dull at 7½*d.* to 8*d.* Several sales have been made in Iodine at 4¼*d.* to 4½*d.*, and now 4¾*d.* is asked for firsts. Sulphate of Ammonia is in strong demand at 14*s.* 3*d.* to 15*s.* 6d. Small sales made in Sulphate of Copper at 32*s.* 6*d.* to 33*s.* Some transactions in Sal Ammoniac have been effected at 38*s.* for firsts, and 36*s.* for seconds. Cream of Tartar is dull and lower, the last sales made were at 117*s.* 6*d* for the best. French Soda Crystals are lower, sales made at 95*s.* per ton, ex. ship. Flour of Brimstone is dull at 12*s.* to 12*s.* 6*d.* More demand for Borate of Lime at slightly better prices. Sulphate of Quinine is rather cheaper, sales made in pelliters for immediate delivery at 6*s.* 9*d.* per oz. British refined Saltpetre is dull and easier, last sales 43*s.* to 43*s.* 6*d.* Canada Pot and Pearl Ashes are without change. Turpentine has been very unsettled, and is now cheaper, the latest purchases made in American at 115*s.* to 120*s.*, and French at 96*s.* to 97*s.* More doing in Petroleum; Pennsylvania Crude sold at 19*s.*, and refined 2*s.* 6*d.*—now 2*s.* 9*d.* asked for the latter, Linseed Oil is dull, and brown spot is now 39*s.* 6*d.*, and Hull 39*s.* Rape is steadier; foreign Brown 47*s.* 6*d.*, and refined 50*s.* per cwt.

Notwithstanding the moderate sale of Drugs brought forward throughout the month, business has been very flat, and where any goods have been pressed the prices have been rather in favour of the buyer. Some fresh parcels of China Rhubarb were offered and sold at 3*d.* to 6*d.* decline, good flat realized 3*s.* 5*d* to 3*s.* 9*d.*, and round 3*s.* 4*d.* to 3*s.* 5*d.* A good quantity of Cardamoms has arrived; Malabar have sold well at from 7*s.* 3*d.* to 7*s.* 8*d.*, Ceylon 5*s.* to 5*s.* 1*d.*, and Madras at 5*s.* 7*d.* to 5*s.* 11*d.*, the latter being about 1*d.* per lb. lower. A few lots Jalap Tops sold at 1*s.* 8*d.* to 1*s.* 9*d.* Some fresh parcels of Bombay Senna sold at 3¼*d.* to 3½*d.*, being former rates, but the late lots of Tinnivelly Senna Pods have been taken in at 7*d.* Oil of Cassia is reduced to 9*s.* 2*d.*, and Aniseed to 5*s.* 9*d.* to 5*s.* 10*d.*, at which prices only a few cases have been sold. Castor Oil is ¼*d.* to ½*d.* lower; good pale seconds selling at 6½*d.* to 7*d.* Turkey Opium was bought in at 19*s* to 20*s.*, being above the value. Gum Animi sold at easier prices. Olibanum is also cheaper. Arabic steady. Turkey Gums chiefly bought in. Cape Aloes are dearer, some good and fine sold at 47*s.* to 49*s.* 6*d.* Ipecacuanha has been sold at 7*s.* 6*d.* to 7*s.* 7*d.* Yellow and Grey Bark is without change. Shellac is 5*s.* to 10*s.* cheaper, owing to large arrivals. Some sales of Nux Vomica brought 8*s.* 6*d.* to 9*s.*

PRICE CURRENT.

☞ *These quotations are the latest for* ACTUAL SALES *in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the* CASH PRICES IN BULK. *They will, however, be able to form a tolerably correct idea of what they ought to pay.*

	1862.				1861.			
	s.	d.	s.	d.	s.	d.	s.	d.
ARGOL, Cape, pr ct.	85	0	100	0	95	0	105	0
French	30	0	..60	0	60	0..	85	0
Oporto, red	45	0	..47	0	45	0..	0	0
Sicily.............	70	0	..78	0	65	0..	80	0
Naples, white.....	65	0	..80	0	65	0..	80	0
Florence, white...	90	0	97	6	90	0	100	0
red....	80	0	..85	0	85	0..	87	6
Bologna, white....	110	0	116	0	115	0	120	0
ARROWROOT, duty 4½ per cwt.								
Bermuda ...per lb.	1	2 ..	1	7	0	11..	1	4
St. Vincent........	0	3½..	0	7	0	2¾	0	6
Jamaica.	0	3½..	0	6	0	2½	0	4
Other West India.	0	3½..	0	4½	0	2..	0	3¼
Brazil............	0	1½..	0	3	0	1½	0	2
East India........	0	1½..	0	3	0	1½	0	2½
Natal.............	0	1½..	0	7½	0	2½	0	6½
Sierra Leone......	0	2¾..	0	3½	0	2½	0	3
ASHES.....per cwt.								
Pot, Canada, 1st sort	34	6 ..	0	0	30	0..	31	0
Pearl, do. 1st sort.	34	6 ..	0	0	36	0..	0	0

	1862.				1861.			
BRIMSTONE,	s.	d.	s.	d.	s.	d.	s.	d.
rough......per ton	130	0	135	0	150	0..	0	0
roll...............	200	0	220	0	270	0	280	0
flour..............	240	0	245	0	300	0	360	0
CHEMICALS,								
Acid—Acetic, pr lb	0	4 ..	0	4½	0	4..	0	4½
Citric	1	6¼..	1	6½	1	9..	1	9¼
Nitric	0	4 ..	0	5	0	3½	0	4
Oxalic........	0	8¼..	0	8½	0	8¼	0	9
Sulphuric	0	0¾..	0	0	0	0¾	0	0
Tartaric crystl	1	7¼..	1	7½	1	8¼	1	8½
powdered.	1	7½..	1	8	1	9..	0	0
Alum .....per ton.	135	0	145	0	130	0	135	0
powder	0	0	0	0	150	0..	0	0
Ammonia. Crb. lb.	0	5½..	0	6	0	5½	0	6
Sulphate per ton	280	0	290	0	260	0	280	0
Antimony, ore....	200	0	210	0	320	0	340	0
crude, per cwt	24	0	..28	0	26	0..	20	0
regulus	43	0	..44	0	50	0..	51	0
French star...	43	0	..43	6	48	0..	0	0
Arsenic, lump....	17	6	..18	6	17	0..	18	6

PRICE CURRENT—*continued.*

	1862.				1861.			
CHEMICALS.	s.	d.	s.	d.	s.	d.	s.	d.
Arsenic powder ..	7	6	..8	0	8	6	..10	0
Bleaching Powder.	9	0	..10	0	8	6	..9	6
Borax, E. I. refind	52	6	..0	0	0	0	..0	0
British........	50	0	..0	0	63	6	..65	0
Calomel....perl b.	2	9	..0	0	2	10	..0	0
Camphor, refined.	3	4	..4	0	3	1	..3	2
Copras. grn. pr. tn.	65	0	..0	0	65	0	..0	0
Crrsiv. Sublmte. lb	1	11	..2	0	1	11	..2	0
Green Emrld. pr. lb	0	9	..0	11	0	9	..0	11
Brunswk. cwt.	14	0	..42	0	14	0	..42	0
Iodine, dry, pr. oz.	0	4¼	..0	4¾	0	4¾	0	5
Magnesia Crbn. ct.	42	6	..45	0	42	6	..45	0
Calcined, lb...	1	6	..0	0	1	6	..0	0
Minium red, pr. ct.	22	6	..23	0	22	6	..23	0
orange........	33	0	..35	0	35	0	..0	0
Ptsh. Bichrom. lb.	0	7½	..0	8	0	9	0	9¼
Chlorate......	1	2	..0	0	0	10¼	0	0
Hydriodate oz.	0	5½	..0	6	0	5	0	5¼
Prussiate..lb.	1	0	..1	0½	1	0¾	1	1
red..	2	1	..2	2	2	2	..0	0
Precipit. red pr. lb	2	9	..2	10	2	9	..2	10
white...	2	9	..2	10	2	10	..0	0
Prussian Blue.....	1	6	..1	10	1	6	..1	10
Rose Pink....pr ct.	29	0	..30	0	29	0	..30	0
Sal-Acetos...pr lb.	0	10½	..0	0	0	10½	0	11
Ammoniac, ct.								
British...	36	0	..38	0	32	6	..33	0
Epsom........	8	0	..8	6	8	3	..8	6
Glauber......	5	0	..5	6	5	6	..0	0
Soda, Ash, pr deg..	0	2	..0	2⅜	0	2¼	0	2¾
Bicarbonate..ct.	12	6	..13	0	12	0	..13	0
Crystals per ton.	0	0	..97	6	92	6	..0	0
Sgr. Lead, whte, ct.	37	0	..0	0	37	0	..38	0
brown........	25	0	..0	0	28	0	..0	0
Slphte. Quinine oz								
Britsh in bttl.	7	6	..0	0	6	9	..7	0
Foreign......	6	9	..7	0	6	4	..0	0
Sulpht. Zinc..cwt.	14	6	..15	0	14	6	..15	0
Verdigris........lb.	1	2	..1	4	1	3	..1	5
Vermilion, English	2	8	..3	1	3	0	..3	4
China ..	2	2	..2	4	2	0	..2	2
Vtrl. blue or Romn.								
per cwt.	32	0	..33	0	32	6	..33	0
COCHINEAL, pr. lb.								
Honduras, black..	2	8	..4	3	2	10	..4	8
silver...	1	5	..3	6	1	9	..3	5
Mexican, black....	2	7	..3	0	2	5	..3	0
silver ..	2	6	..2	7	2	3	..2	5
Lima	2	8	..3	2	2	7	..3	4
Teneriffe, black ..	2	8	..3	1	2	8	..3	1
silver ..	2	6	..2	9	2	7	..2	9
DRUGS,								
Aloes, Hepatic, ct.	130	0	200	0	120	0	160	0
Socotrine	160	0	480	0	150	0	480	0
Cape, good....	45	0	..50	0	38	0	..43	0
inferior.	20	0	..40	0	20	0	..36	0
Barbadoes....	60	0	420	0	60	0	420	0
Ambergris, gray.								
per oz..	30	0	..35	0	35	0	..38	0
Angelica Root, ct..	20	0	..35	0	20	0	..35	0
Aniseed, China str.	90	0	100	0	65	0	..75	0
German, &c.	19	0	..38	0	22	0	..42	0
Balsam Canada, lb	1	3	..0	0	1	4	..0	0
Capivi......	1	6	..1	7½	1	8	..1	9
Peru........	5	0	..5	3	4	7	..4	8
Tolu	4	1	..4	6	3	4	..3	7
Bark Cascarilla ct.	23	0	..40	0	24	0	..40	0
Peru crown & grey								
per lb..........	1	0	..2	4	1	2	..2	6
Calisaya, flat...	4	0	..4	3	3	6	..3	9
quill....	3	0	..3	9	3	4	..3	6
Carthagena....	1	3	..2	6	0	10	..2	0
Pitayo........	1	10	..2	9	1	6	..2	2
Red	2	6	..7	6	2	0	..6	0
Bay Berries, pr ct..	22	0	..40	0	22	0	..40	0
Bucca Leaves, lb.	0	3	..1	6	0	3	..1	6
Camomile Flowers	40	0	..80	0	40	0	..90	0
Camphor, China ..	300	0	..0	0	170	0	..0	0
Canella Alba......	19	0	..40	0	19	0	.40	0
Cantharides, pr lb.	2	8	..2	10	2	1	..2	2
Cardamoms. Mlbar.								
good...........	7	0	..7	8	4	10	..5	1

	1862.				1861.			
DRUGS.	s.	d.	s.	d.	s.	d.	s.	d.
Cardamoms, inferior	5	9	..7	2	3	10	..4	9
Madras..	3	2	..6	0	3	4	..4	9
Ceylon ..	4	9	..5	0	3	0	..4	0
CassiaFistula pr ct.	26	0	..60	0	22	0	..33	0
CastorOil, 1stpale, lb	0	7	..0	7¼	0	6	0	6¼
second......	0	6½	..0	6¾	0	5½	0	5½
infr. & dark	0	6	..0	6½	0	5¼	0	5½
Bombay. in csks.	0	5½	..0	6½	0	5	..0	5½
Castorum	1	0	..26	0	1	0	..28	0
China Root, pr ct.	10	0	..15	0	9	0	..10	0
Coculus Indicus ..	9	0	..12	0	12	0	..15	6
Cod-liver Oil, gal...	4	2	..6	0	4	9	.6	6
Clcynth. apple, lb..	0	8	..1	0	0	8	..1	2
Colombo Rt. pr ct..	15	0	..50	0	15	0	..48	0
Cream Tartar, pr ct.								
French	117	6	..0	0	123	6	..0	0
Venetian	115	0	117	6	125	0	..0	0
grey	112	6	115	0	112	6	120	0
brown........	105	0	110	0	108	0	112	6
Croton Seed	45	0	..65	0	90	0	105	0
Cubebs	120	0	125	0	140	0	..0	0
Cummin Seed	36	0	..38	0	36	0	..42	0
Dragon's bld. reed.	200	0	320	0	200	0	240	0
lump...	90	0	300	0	170	0	200	0
Galangal Root....	26	0	..32	0	20	0	..23	0
Gentian Root	21	0	..22	0	14	0	..17	0
Guinea Grains, ...								
per cwt.	47	0	..50	0	48	0	..52	6
Honey, Narbonne.	60	0	..84	0	60	0	..85	0
Cuba	24	0	..36	0	28	0	..36	0
Jamaica	26	0	..75	0	26	0	..80	0
Ipecacuanha, pr. lb.	7	5	.7	9	5	3	..5	7
Isinglass, Brazil...	0	10	..3	10	0	9	..3	10
East India......	0	9	..3	0	0	9	..3	0
West India	3	0	..3	0	3	0	..3	6
Russian........	9	6	..13	0	10	6	..13	0
Jalap	1	9	..5	6	1	6	..4	9
Jniper Berries cwt.								
German & Frnch	9	0	..11	0	10	0	..10	6
Italian	10	0	..12	0	9	6	..12	0
LmonJuice, pr deg.	0	0½	..0	1	0	0¾	0	1
Liquorice, per cwt.								
Spanish	83	0	..90	0	83	0	..90	0
Italian	85	0	..95	0	85	0	..95	0
Manna, flaky	2	0	..2	6	2	6	..3	0
small	1	6	..1	9	1	6	..2	0
Musk......per oz.	20	0	.28	0	20	0	..32	0
Nux Vomica......	8	0	..8	6	8	0	..8	6
Opium, Turkey ..	12	0	..19	0	15	6	..16	0
Egyptian..	6	0	..13	0	6	0	..13	0
Orris Root, pr cwt.	27	0	..29	0	27	0	..29	6
Pink Root, per lb...	3	0	..3	3	1	9	..2	2
Quassia(bit. wd)ton	90	0	110	0	70	0	..80	0
Rhatania Root, lb.	0	9	..1	6	0	10	..1	0
Rhbrb. China, rnd.	1	9	..4	0	0	9	..2	6
flat	2	2	..4	3	1	0	..3	0
Dutch, trmd.	5	0	..5	6	3	0	..3	6
Russian	11	6	..16	0	11	6	..0	0
Saffron, Spanish ..	45	0	..47	0	54	0	..58	0
Salep .... per cwt.	150	0	160	0	180	0	200	0
Sarsaparilla, Lima	0	10	..1	5	0	10	..1	4
Para	0	9	..1	2	0	10	..1	3
Honduras.	0	8	..1	4	0	11	..1	6
Jamaica..	1	4	..2	6	1	3	..2	3
Sassafras.. per cwt.	11	0	..12	0	12	0	..13	0
Scammony. per lb.								
virgin....	28	0	..36	0	28	0	..34	0
second ..	14	0	..24	0	14	0	..24	0
Sencka Root......	4	6	..5	0	2	2	..2	6
Senna, Calcutta ..	0	1½	..0	2½	0	1½	0	2½
Bombay	0	2½	..0	4	0	2	0	3
Tinnevelly..	0	4	..1	2	0	2½	0	11½
Alexandria	0	3	..0	6	0	4	..0	6½
Snake Root	2	3	..0	0	1	8	..1	9
Spermaceti, refined	1	0	..1	1	1	0	..1	1
Squills	0	1	..0	2	0	1	..0	0
Tamarinds, E. Ind.	10	0	..12	0	9	0	..12	0
W.I. per cwt.	15	0	..40	0	16	0	..32	0
Valerian Root, Eng	20	0	..40	0	20	0	..40	0
Terra Japonica—								
Gambier, cwt ..	23	0	..25	0	17	0	..18	0
Cutch, cwt	25	0	..26	0	24	0	..25	6

PRICE CURRENT—*continued.*

	1862.				1861.			
DRUGS.	s.	d.	s.	d.	s.	d.	s.	d.
Vanilla, Mexican lb	25	0	..55	0	20	0	..50	0
Wormseed, pr cwt.	2	0	.. 0	0	2	0	.. 0	0
GUM. .... per cwt.								
Ammoniac, drop..	100	0	120	0	70	0	105	0
lump ..	15	0	..65	0	15	0	..40	0
Animi, fine pale ..	240	0	270	0	290	0	310	0
bold amber.	220	0	260	0	260	0	270	0
medium....	170	0	190	0	170	0	230	0
small & dark	100	0	125	0	100	0	160	0
ordinry dark	40	0	..80	0	50	0	100	0
Arab. E.I. f. palepkd	52	0	..59	0	52	0	..58	0
unsortd, good to f	32	0	..48	0	36	0	..48	0
red and mixed	20	0	..30	0	28	0	..34	0
siftings	0	0	.. 0	0	18	0	..23	0
Turkey, pkd. gd to f.	115	0	180	0	110	0	145	0
second & infr.	40	0	110	0	42	0	105	0
in sorts	30	0	..40	0	30	0	..43	0
Gedda.............	26	0	..28	0	24	0	..25	0
Barbary, white ..	36	0	..40	0	30	0	..32	0
brown ..	30	0	..33	0	26	0	..27	0
Australian...... .	23	0	..30	0	16	0	..18	0
Assafœt. fr. to gd.	30	0	110	0	16	0	..95	0
Benjamin, 1st. qual.	400	0	580	0	360	0	660	0
2nd qual	280	0	400	0	160	0	330	0
3rd ,,	50	0	190	0	60	0	150	0
Copal, Angola red.	100	0	110	0	100	0	105	0
pale.	97	6	105	0	85	0	105	0
Benguela....	110	0	130	0	85	0	120	0
Sierra Lne lb	0	8	.. 1	10	0	7	.. 1	8
Manilla prct	20	0	..43	0	12	0	..40	0
Dammar ple. pr ct	42	0	..50	0	36	0	..49	0
Galbanum........	100	0	120	0	120	0	160	0
Gmbge. pkd. pipe	140	0	200	0	120	0	170	0
in sorts.....	80	0	120	0	80	0	110	0
Guaiacum ..pr. lb.	0	6	.. 1	6	0	7	.. 1	6
Kino ....per cwt.	220	0	280	0	100	0	140	0
Kowrie...........	24	0	..30	0	16	0	..20	0
Mstic. pkd. pr lb..	5	0	.. 5	6	6	6	.. 7	6
Myrrh gd & fi pr ct	160	0	200	0	140	0	180	0
sorts........	70	0	150	0	70	0	130	0
Olibanum, pl. drop	65	0	..67	6	56	0	..66	0
ambr & yel.	45	0	..64	0	40	0	..55	0
mixd. & dk.	10	0	..30	0	12	0	..25	0
Senegal	38	0	..44	0	42	0	..46	0
Sandrac	75	0	107	6	75	0	100	0
Tragacanth, leaf..	180	0	340	0	180	0	330	0
in sorts.	100	0	130	0	100	0	130	0
OILS.......per tun.	£	*s.*	£	*s.*	£	*s.*	£	*s.*
Seal	43	0	..47	10	36	0	..41	0
Sperm, body......	88	0	..90	0	89	0	..90	0
Cod..............	48	10	..49	0	35	10	.. 0	0
Whale, Greenland.	0	0	.. 0	0	0	0	.. 0	0
Sth Sea pale	43	0	..44	0	34	0	..35	10
E. I. Fish...	37	10	..38	0	30	10	..32	0
Olive, Galipoli, ton.	61	10	..62	0	61	0	..62	0
Florence, ½-chst.	1	0	.. 1	2	20	0	..22	0
Cocoant. Cochn. tn	57	6	.. 0	0	50	0	..51	0
Ceylon	53	6	..54	0	49	6.	50	0
Sydney	46	0	..53	0	46	0	..50	0
Ground Nut & Gin.								
Bombay........	48	10	..50	0	41	0	..42	0
Madras	49	0	..50	10	44	0	..45	0
Palm, fine........	41	10	..42	0	45	10	.. 0	0
Linseed	39	10	.. 0	0	34	9	..35	0
Rapesd. Engl. pale	50	0	.. 0	0	46	0	.. 0	0
brown.......	47	0	.. 0	0	43	0	.. 0	0
Foreign do ..	50	0	..52	0	47	0	.. 0	0
brown......	47	6	..48	0	43	0	.. 0	0
Lard	49	0	..50	0	54	0	.. 0	0
Tallow	40	0	..41	0	39	0	.. 0	0
Rock Crude	13	6	..19	0	0	0	.. 0	0
OILS, Essential—	*s.*	*d*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Almond essen. lb.	19	0	.. 0	0	19	0	.. 0	0
expressed ..	0	0	.. 0	0	.1	0	.. 0	0
Aniseed..........	5	10	.. 0	0	6	8	.. 6	9
Bay.......pr cwt.	110	0	120	0	122	6	.. 0	0
Bergamott, pr lb.	5	6	.12	0	6	6	..14	0
Cajeputa, bond, oz.	0	2½	.. 0	3	0	1½	0	1¾
Caraway....pr lb.	4	3	.. 6	0	4	3	.. 6	0
Cassia	9	2	.. 9	3	9	0	.. 9	1
Cinamon (in b), oz.	1	6	.. 4	0	1	0	.. 3	10
Cinnamon Leaf...	0	3	.. 0	4	0	2	.. 0	4
OILS.	s.	d.	s.	d.	s.	d.	s.	d.
Citronel..........	0	6	.. 0	6½	0	4	0	4¼
Clove	0	4	.. 0	0	0	4	0	0
Croton	0	3	.. 0	4	0	3	0	4
Juniper ....per lb.	1	10	.. 4	0	1	10	.. 4	0
Lavender	2	6	.. 5	0	2	6	.. 5	0
Lemon	4	0	.. 8	6	5	0	..10	6
Lemongrass, pr oz	0	5½	.. 0	6¼	0	5	.. 0	5¾
Mace, ex	0	1½	.. 0	2	0	1½	0	2
Neroli............	6	0	.. 9	0	6	0	.. 9	0
Nutmeg	0	1¼	.. 0	2½	0	1½	0	2½
Orange ....per lb.	5	0	.. 6	6	6	6	.. 7	0
Otto Roses, per oz.	15	0	..23	0	16	0	..25	0
Peppermint, pr lb.								
American	8	6	..13	0	7	6	..14	0
English	33	0	..34	0	33	0	..38	0
Rhodium ..per oz.	3	9	.. 6	0	3	9	.. 6	0
Rosemary..per lb.	1	10	.. 3	0	1	10	.. 3	0
Sassafras	3	0	.. 3	6	3	6	.. 4	6
Spearmint........	5	0	..10	0	5	0	..12	6
Spike	1	3	.. 1	6	1	3	.. 1	6
Thyme	1	9	.. 2	3	1	9	.. 2	6
PITCH, Brtsh, pr cwt.	12	0	.. 0	0	7	0	.. 0	0
Swedish	0	0	.. 0	0	10	6	.. 0	0
SALTPETRE, pr cwt.								
Bngl, 6 p.c. or under	39	6	..40	6	34	6	..35	0
over 6 per cent.	37	6	..39	0	32	0	..34	0
Madras	35	0	..37	6	31	0	..33	0
Bombay	35	0	..37	6	30	0	..33	0
British-refined....	43	0	..43	6	37	0	..38	0
Nitrate of Soda ..	13	6	..14	0	13	0	..14	0
SEED, Canary, pr qr.	42	0	..58	0	0	0	.. 0	0
Caraway, Eng, p. c.	0	0	.. 0	0	23	0	..25	0
German, &c	0	0	.. 0	0	0	0	.. 0	0
Coriander	0	0	.. 0	0	0	15	.. 0	17
East India......	0	0	.. 0	0	0	0	.. 0	0
Hemp	0	0	.. 0	0	44	0	..46	0
Linseed, Black Sea	60	0	..61	0	60	0	..61	0
Calcutta........	63	0	..65	0	62	0	..64	0
Bombay........	70	0	..71	0	67	0	.. 0	0
Egyptian	60	0	..62	0	58	0	..60	0
Mustard, brn, p. bhl	7	0	..12	0	8	0	..13	0
white..	7	0	.. 8	6	8	0	..10	0
Poppy, E.I. per qr.	59	0	.. 0	0	59	0	..60	0
Rape, English	0	0	.. 0	0	0	0	.. 0	0
Danube	0	0	.. 0	0	69	0	..70	0
Calcutta, fine ..	65	0	..66	0	64	0	.. 0	0
Bombay........	66	0	..74	0	64	0	..71	0
Teel, Sesme or Gngy	65	0	..71	0	64	0	..70	0
Cotton ....per ton	180	0	.. 0	0	150	0	160	0
Gnd. Nut Krnels, tn	330	0	350	0	340	0	0	0
SOAP, Lnd. yel. pr ct.	21	0	..36	0	21	0	..36	0
mottled	34	0	..36	0	34	0	..36	0
curd........	50	0	.. 0	0	50	0	.. 0	0
Castile	38	0	..40	0	37	0	..40	0
Marseilles	40	0	..41	0	40	0	..41	6
SOY, China, per gal.	2	6	.. 2	8	2	1	.. 2	3
Japan	0	10	.. 1	0	0	8	.. 0	10
SPONGE, Turk. f. pkd	20	0	..24	0	20	0	..26	0
fair to good	8	0	..18	0	9	0	..18	0
ordinary..	3	0	.. 6	0	3	0	.. 8	0
Bahama ..	0	4	.. 1	3	0	3	.. 1	0
TURPENTINE,								
Rough..per cwt.	0	0	.. 0	0	22	0	.. 0	0
Spirits, English ..	0	0	.. 0	0	0	0	.. 0	0
American, incsks	115	0	120	0	70	0	.. 0	0
WAX, Bees, English	172	0	175	0	165	0	170	0
German	160	0	180	0	160	0	165	0
American	165	0	175	0	180	0	200	0
white fine	0	0	.. 0	0	200	0	215	0
Jamaica	170	0	180	0	180	0	190	0
Gambia	170	0	175	0	180	0	.. 0	0
Mogadore	125	0	160	0	125	0	150	0
East India........	140	0	170	0	150	0	170	0
ditto, bleached..	160	0	200	0	170	0	220	0
vegetable, Japan..	70	0	..85	0	56	0	..75	0
WOOD, DYE, per ton,								
Fustic, Cuba	160	0	170	0	160	0	175	0
Jamaica	115	0	120	0	110	0	120	0
Savanilla	100	0	..0	0	100	0	110	0
Zante	0	0	..0	0	140	0	180	0
Logwood, Cmpchy	190	0	210	0	180	0	192	6
Honduras	140	0	145	0	120	0	125	0
St. Domingo. ..	110	0	115	0	115	0	120	0
Jamaica	105	0	110	0	105	0	110	0

PATENTS

742. W. Gossage. *Improvements in the manufacture of soda and potash.* Dated March 17, 1862.

The patentee claims the manufacture of soda and potash in a caustic state, by causing carbonate of soda, or carbonate of potash in a state of solution, to become filtered through slaked lime as described. *Patent completed.*

760. R. A. Brooman. *Improvements in the manufacture of barytes and barytic products, and the application of these substances in the manufacture of sugar and other uses.* (A communication.) Dated March 18, 1862.

In carrying out this invention the inventor takes carbonate of barytes and treats it according to the process known as those of Messrs. Dubrunfaut and Leplay, that is to say, he pulverizes carbonate of barytes, mixes it with powdered coal, and calcines it in a reverberatory furnace. After having been subjected to heat for from about five to six hours, a product is obtained composed of caustic barytes, coal, and ash, known as raw barytes. This composition is cooled out of contact with the air; it is afterwards lixiviated, and a solution of barytes is obtained adapted to effect the precipitation of sugar. The caustic solutions are first desulphurized by hydrated oxide of iron, or by hydrated oxide of zinc; they are then concentrated in iron vessels, heated by the gases from the reverberatory furnaces, or otherwise. When the solutions have acquired the greatest density of which they are capable without forming a deposit, they are removed to iron vessels similar to those used in the manufacture of caustic potash and soda. The caustic barytes is reduced in these vessels to the state of dissolved hydrate with one equivalent of water; it is next run into iron pots in blocks easy to carry. The inventor states that this economical method of preparing barytes will enable it to be sold at so low a price that its use will spread for many purposes. The hydrate may be used in sugar refineries for precipitating the treacle, and the carbonates may be returned by the refiners to the manufacturers to reduce. The processes above described for natural carbonate of barytes apply to artificial carbonates of barytes, and the hydrates of barytes may be manufactured by means of sulphate. For that purpose he reduces in a furnace sulphate of barytes mixed with coal, exactly as above stated for the treatment of the carbonate of barytes. He thus obtains raw sulphuret, which, by washing, yields solutions of sulphuret of barium. These solutions, treated by a current of carbonic acid, yield carbonate of barytes, which is transformed into hydrate by the processes above described. Sulphuret of barium may be used in excess to precipitate sugar; then the sugar of barytes and the mother waters treated by carbonic acid will yield carbonate of barytes, which may be treated according to the processes hereinbefore described to obtain the hydrate. *Patent completed.*

813. B. Fleet. *Improvements in apparatus for manufacturing and bottling soda water.* Dated March 24, 1862.

This relates, first, to combining in one machine the apparatus for making soda water, and a steam-engine for driving the same, the same shaft and fly-wheel answering the purpose of both, as also, to a great extent, the same framing. This is readily effected by disposing a steam cylinder on the bed plate of the machine, or other supporting part, and mounting a crank on the end of the machine shaft to which the piston rod may be directly connected, or it may be otherwise arranged. A suitable feed is also applied to supply the boiler. The second part relates to the lifting apparatus. This the patentee disposes at that part of the machine from which the soda water is ordinarily drawn, and as bottled by hand, by which and other arrangements the soda water is even better than that bottled by hand, and infinitely superior to that bottled by rack-bottling machines. The channel in which he places the cork, guiding and forcing it into the bottle, he forms cylindrical, and fits therein a plunger, by which the cork is driven into the bottle. The plunger has a cap, leather or other packing, near the nose, which fits the cylindrical passage receiving the cork, and prevents the escape of gas upwards, while the bottle neck being pressed upwards against a soft substance at the lower part, as usual, prevents any escape thereat. The soda water enters the cylindrical channel below the position of the cork, and when the bottle is filled, the cork is forced down by the plunger into the bottle, thus easily and effectually bottling the soda water. The plunger is brought down by a screw of rapid pitch (an eight-thread screw), so that about one-half a turn is sufficient, which forms a feature of this invention. *Patent completed.*